

TOWN OF ADDISON

KELLER SPRINGS ROAD AND QUORUM DRIVE INTERSECTION IMPROVEMENTS

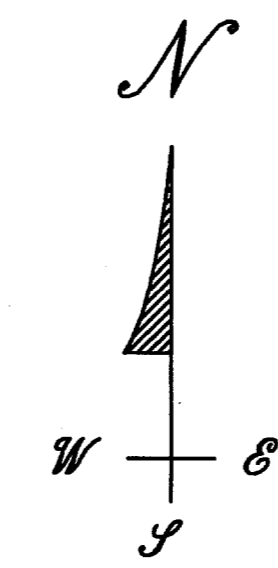
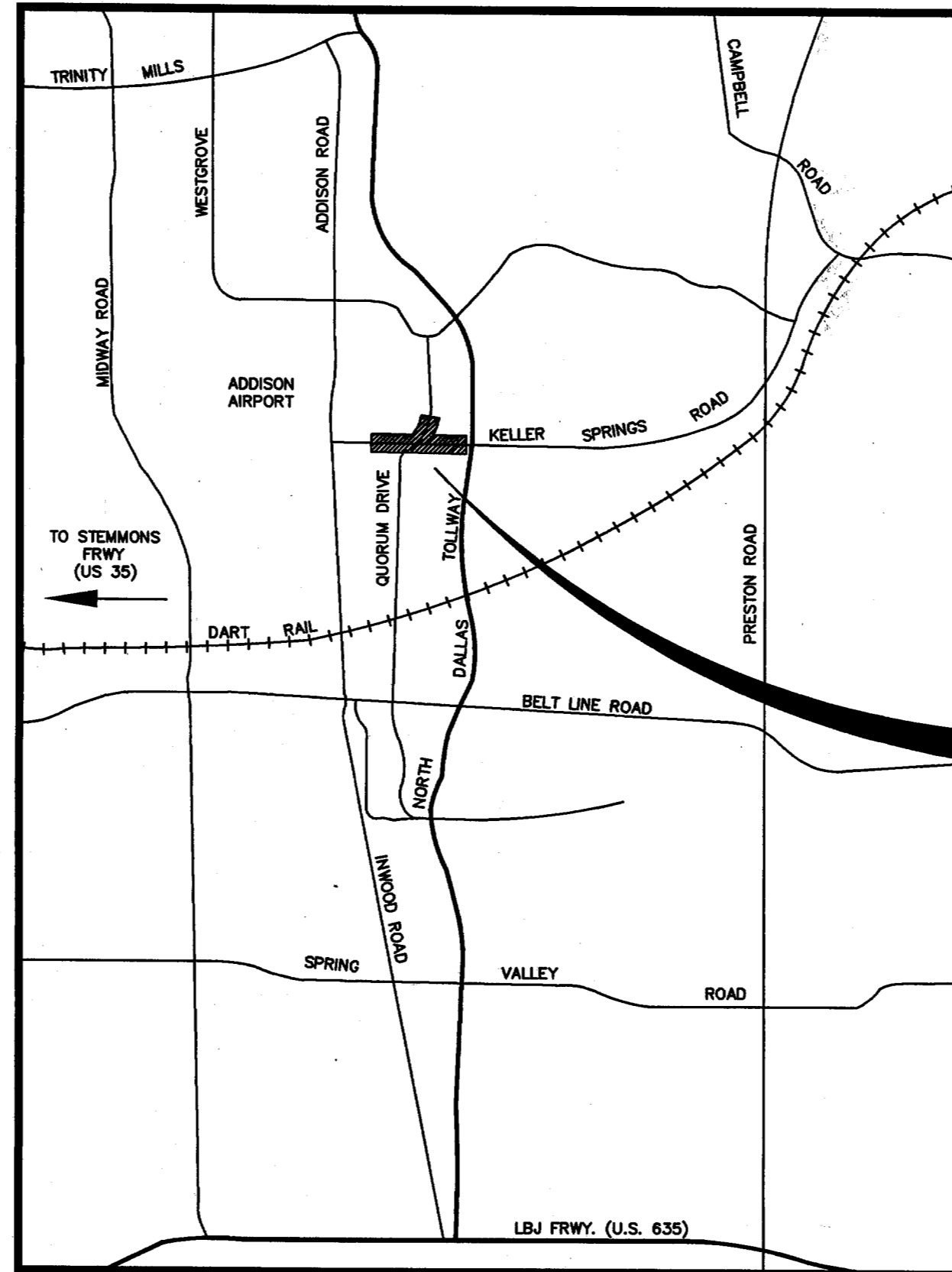
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BI-12a

TOWN OF ADDISON, TEXAS

KELLER SPRINGS ROAD & QUORUM DRIVE
INTERSECTION IMPROVEMENTS

TNP PROJECT NUMBER ADD 97277



PROJECT
LOCATION

SHEET INDEX

- 1A. TRAFFIC CONTROL PLAN PHASES I & II
- 1B. TRAFFIC CONTROL PLAN PHASE III
- 1C. PAVING IMPROVEMENTS STA. 0+00 TO STA. 5+90
2. PAVING IMPROVEMENTS STA. 5+90 TO END
3. GRADING IMPROVEMENTS STA. 0+00 TO STA. 5+90
4. GRADING IMPROVEMENTS STA. 5+90 TO END
5. PAVEMENT MARKINGS STA. 0+00 TO STA. 5+90
6. PAVEMENT MARKINGS STA. 5+90 TO END
7. CROSS SECTIONS STA. 0+50 TO STA. 4+10
8. CROSS SECTIONS STA. 4+50 TO STA. 8+00
9. CROSS SECTIONS STA. 8+50 TO STA. 10+00
10. MISCELLANEOUS DETAILS - SHEET 1
11. MISCELLANEOUS DETAILS - SHEET 2
12. INTERSECTION LAYOUT
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14. TRAFFIC SIGNAL HEADS DETAIL SHEET
15. TRAFFIC SIGNAL POLE FOUNDATIONS DETAIL SHEET
16. CONTROLLER FOUNDATION AND GROUND BOX INSTALLATION DETAIL SHEET
17. SERVICE POLE AND GROUNDING DETAIL SHEET
18. TRANSFORMER BASE DETAIL SHEET
19. TRAFFIC CONTROL PLAN - SHEET 1 OF 2
20. TRAFFIC CONTROL PLAN - SHEET 2 OF 2

CONSTRUCTION SET
ISSUED BY
TOWN OF ADDISON
PUBLIC WORKS DEPARTMENT

CONSTRUCTION SET
ISSUED BY
TOWN OF ADDISON
PUBLIC WORKS DEPARTMENT
NAME: *[Signature]* DATE: 6-9-99

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1999

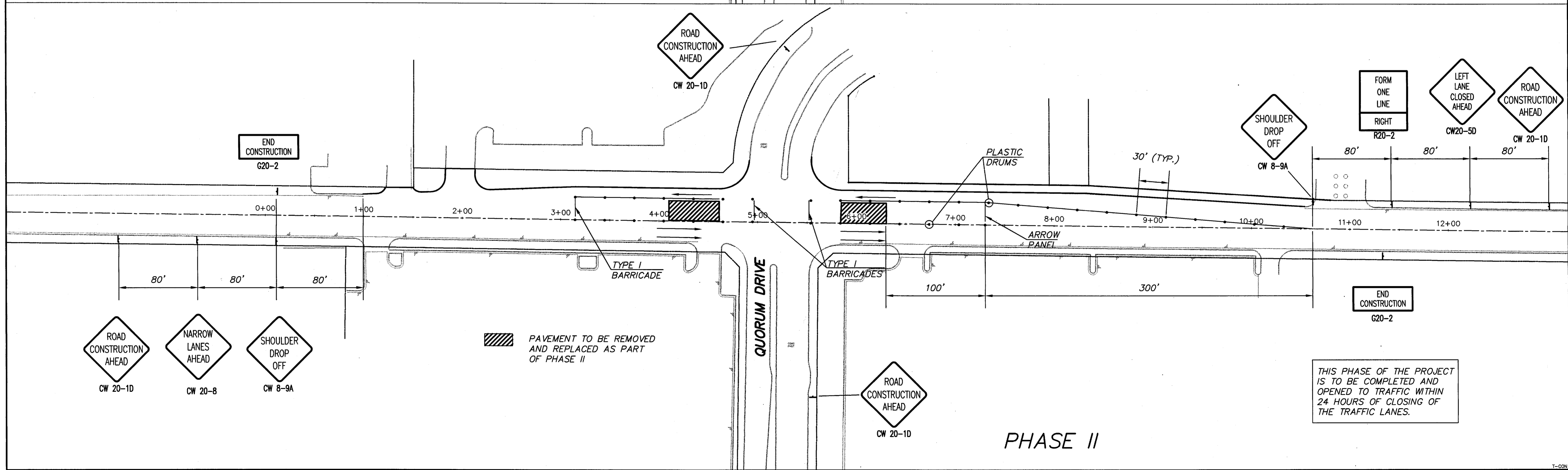
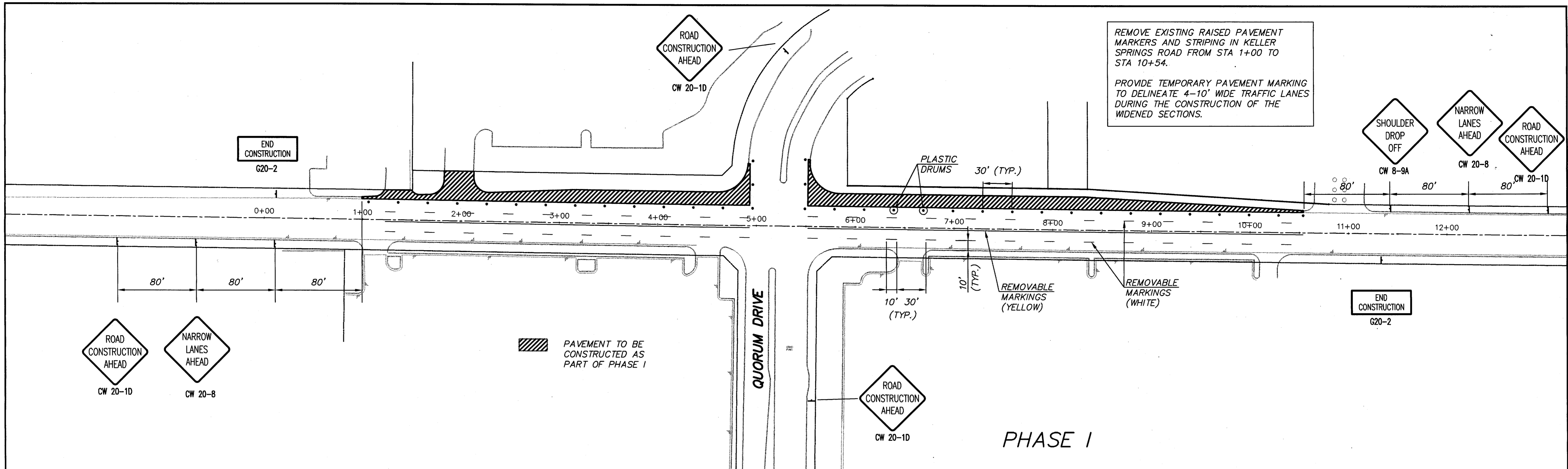


Delvin Black, P.E.
Date: 14 Apr 99

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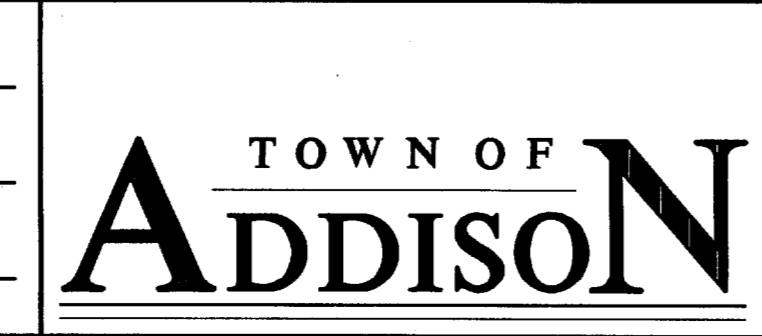
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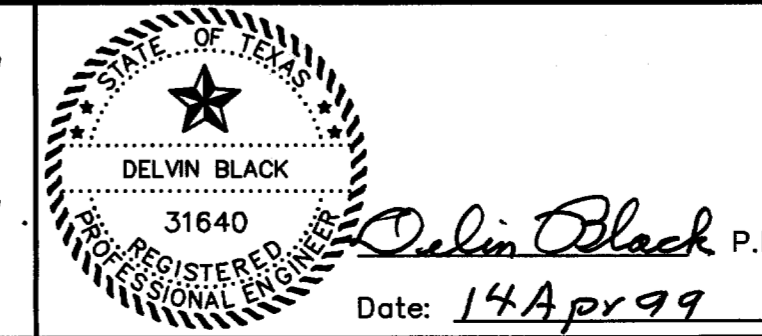
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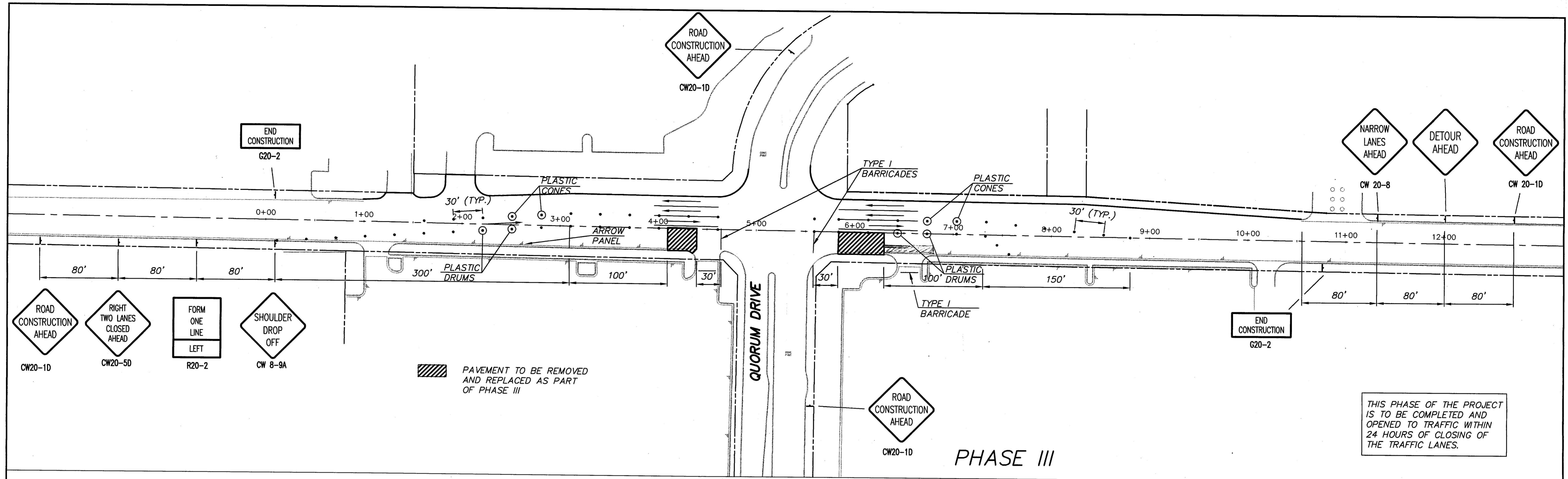
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 VERT N/A
 DATE APR 1999

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TOWN OF ADDISON
 KELLER SPRINGS ROAD/QUORUM DRIVE
PAVING IMPROVEMENTS
 TRAFFIC CONTROL PLAN
 PHASES I & II

TNP PROJECT ADD 97277
 SHEET **1A**
 OF 20



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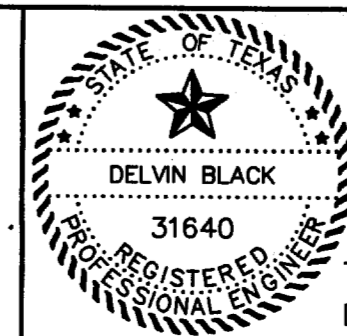
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TOWN OF
ADDISON

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DATE
APR 1999



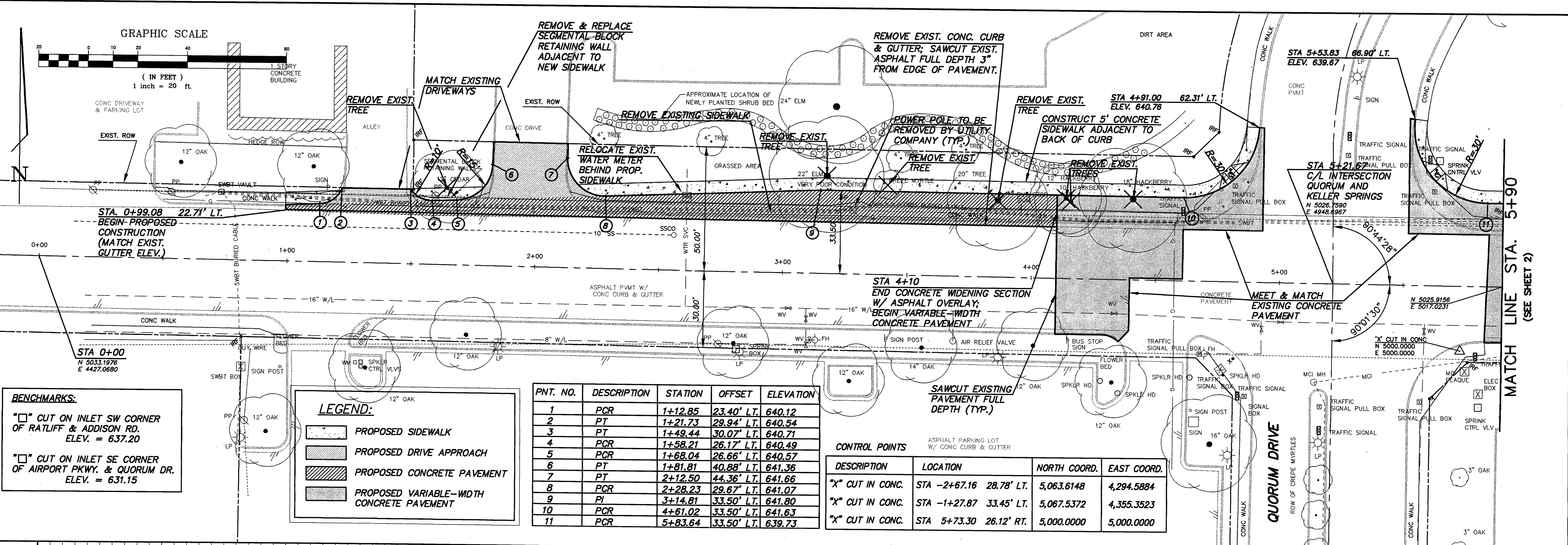
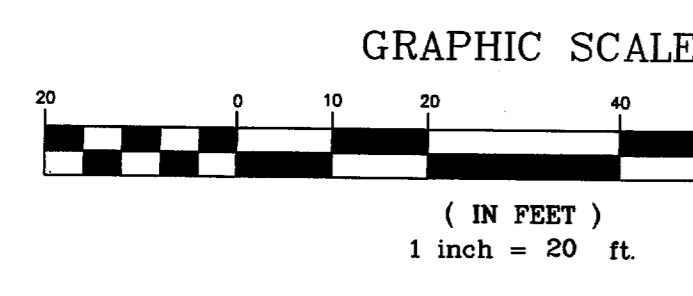
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Delvin Black P.E.
Date: 14 Apr 99

TOWN OF ADDISON
KELLER SPRINGS ROAD/QUORUM DRIVE
PAVING IMPROVEMENTS
TRAFFIC CONTROL PLAN
PHASE III

TNP PROJECT
ADD. 97277
SHEET
1B
OF
20



BENCHMARKS:

"□" CUT ON INLET SW CORNER OF RATLIFF & ADDISON RD. ELEV. = 637.20

"□" CUT ON INLET SE CORNER OF AIRPORT PKWY. & QUORUM DR. ELEV. = 631.15

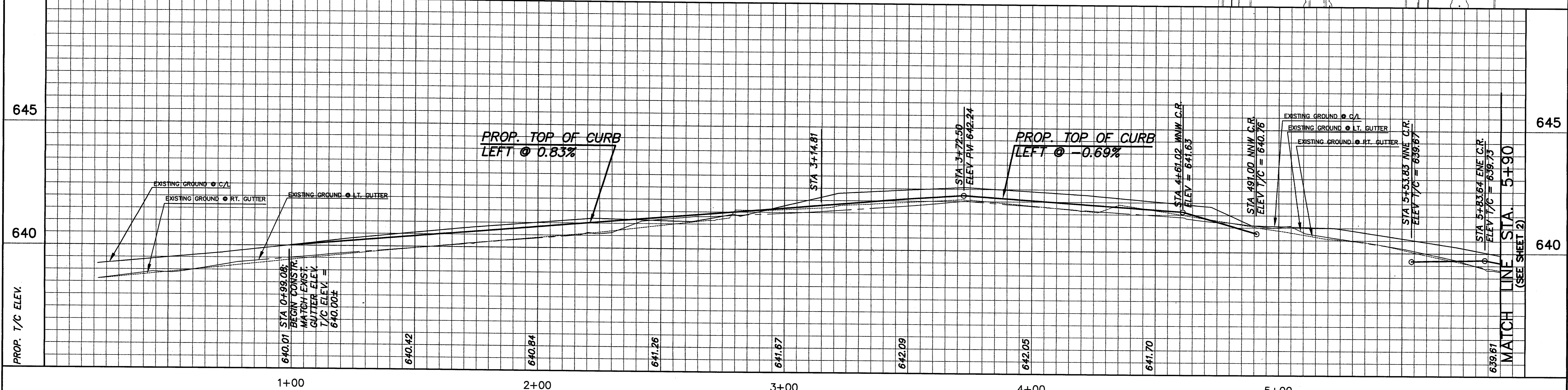
LEGEND:

- PROPOSED SIDEWALK
- PROPOSED DRIVE APPROACH
- PROPOSED CONCRETE PAVEMENT
- PROPOSED VARIABLE-WIDTH CONCRETE PAVEMENT

PNT. NO.	DESCRIPTION	STATION	OFFSET	ELEVATION
1	PCR	1+12.85	23.40' LT.	640.12
2	PT	1+21.73	29.94' LT.	640.54
3	PT	1+49.44	30.07' LT.	640.71
4	PCR	1+58.21	26.17' LT.	640.49
5	PCR	1+68.04	26.66' LT.	640.57
6	PT	1+81.81	40.88' LT.	641.36
7	PT	2+12.50	44.36' LT.	641.66
8	PCR	2+28.23	29.67' LT.	641.07
9	PI	3+14.81	33.50' LT.	641.80
10	PCR	4+61.02	33.50' LT.	641.63
11	PCR	5+83.64	33.50' LT.	639.73

CONTROL POINTS

DESCRIPTION	LOCATION	NORTH COORD.	EAST COORD.
"X" CUT IN CONC.	STA -2+67.16 28.78' LT.	5,063.6148	4,294.5884
"X" CUT IN CONC.	STA -1+27.87 33.45' LT.	5,067.5372	4,355.3523
"X" CUT IN CONC.	STA 5+73.30 26.12' RT.	5,000.0000	5,000.0000



NO.	REVISION	BY	DATE

DESIGNED BY: **DEB**

DRAWN BY: **JPS**

CHECKED BY: **JRP**

TOWN OF ADDISON

SCALE
HORIZ 1"=20'
VERT 1"=2'
DATE
APR 1999

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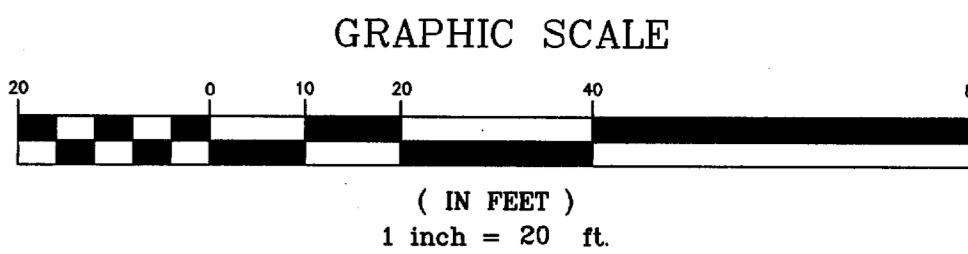
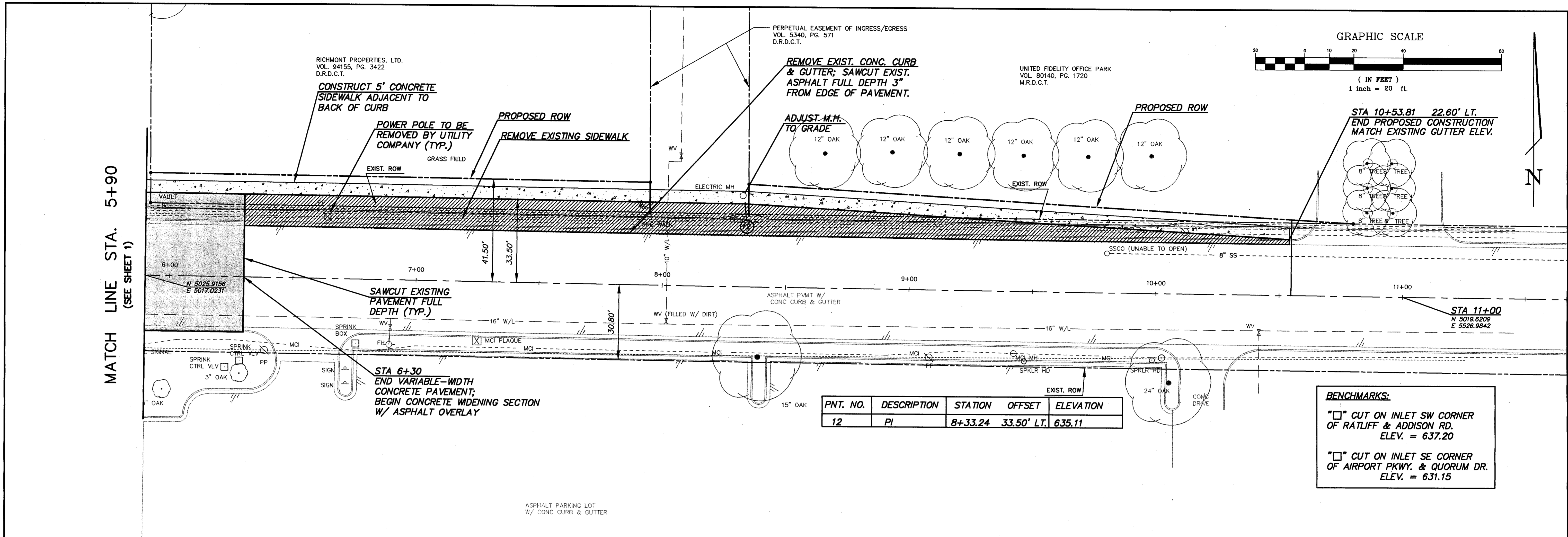
2001 West Irving Blvd. Irving, Texas 75061 (972) 254-1765

STATE OF TEXAS
DELVIN BLACK
31640
REGISTERED PROFESSIONAL ENGINEER
Date: 14 Apr 99

TOWN OF ADDISON, TEXAS
KELLER SPRINGS ROAD/QUORUM DRIVE
PAVING IMPROVEMENTS
PLAN & PROFILE
STA. 0+00 TO STA. 5+90

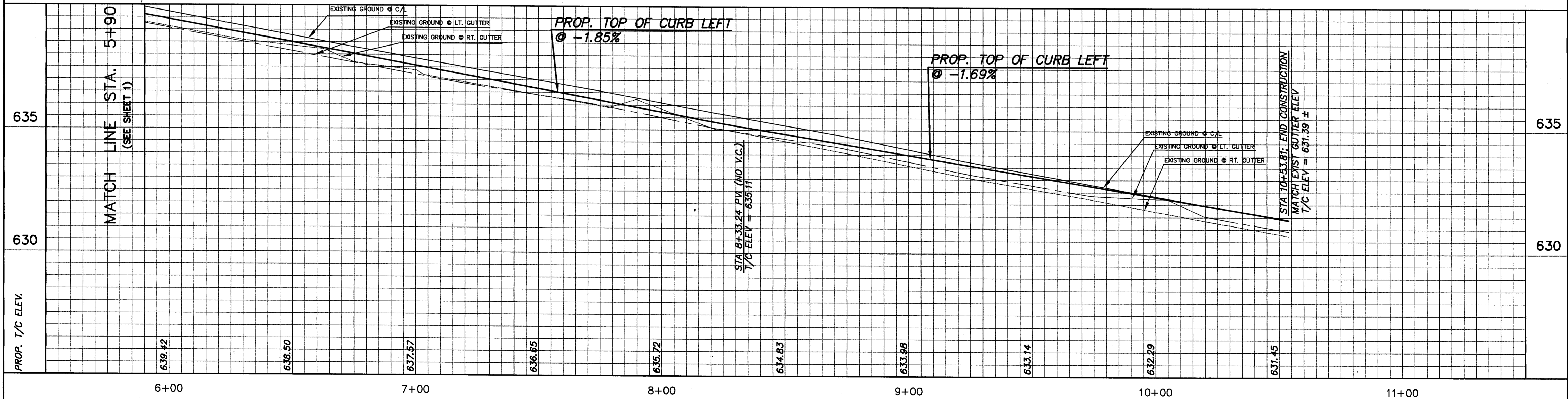
TNP PROJECT ADD97277
SHEET **1C** OF 20

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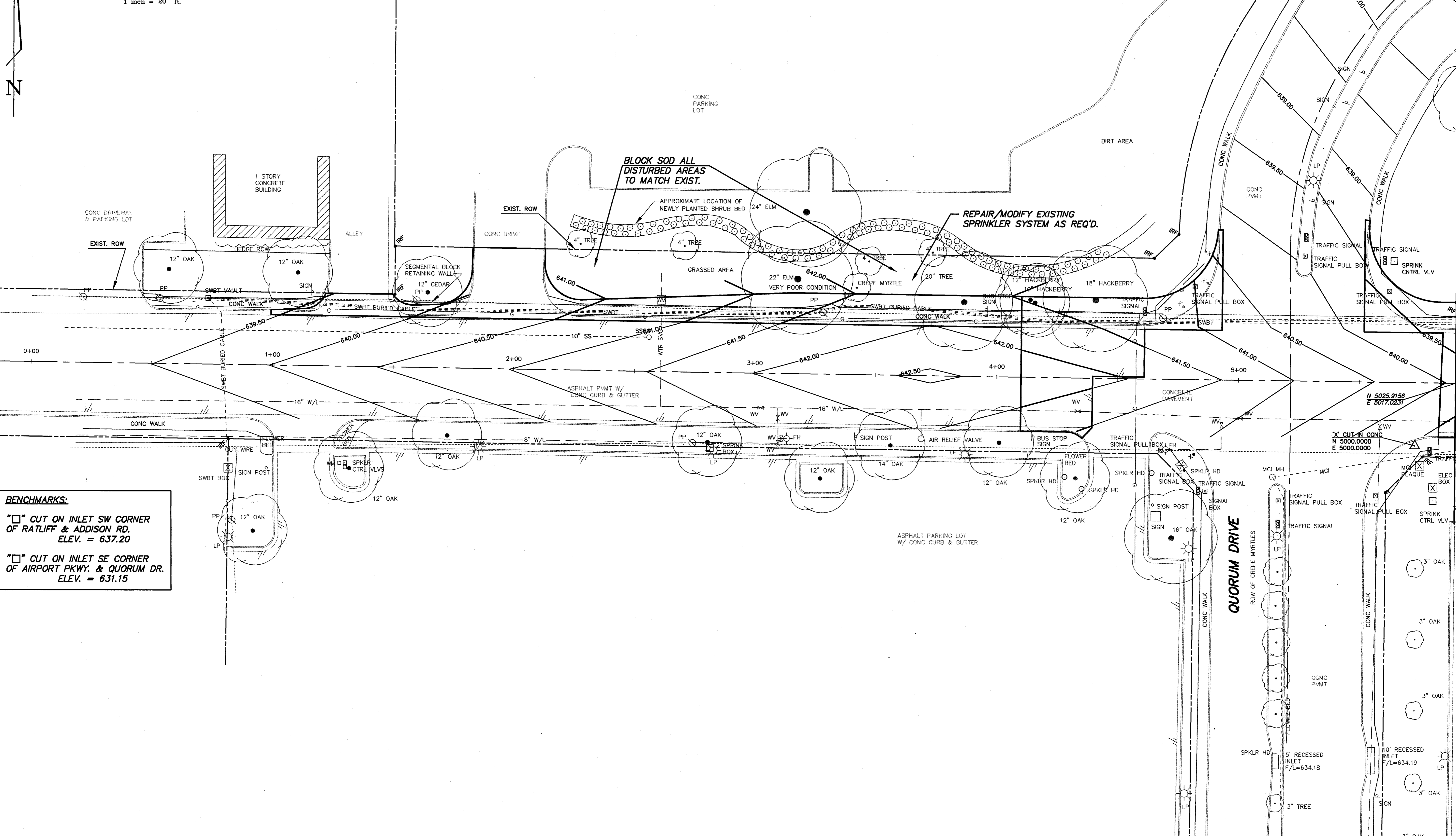
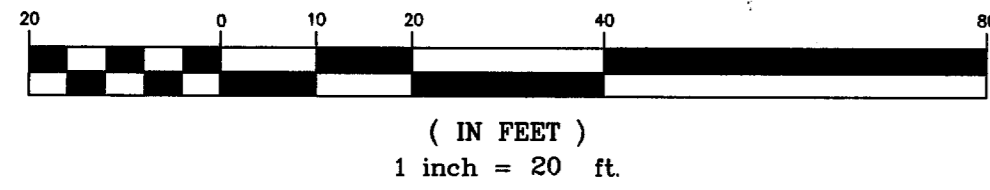
PNT. NO.	DESCRIPTION	STATION	OFFSET	ELEVATION
12	PI	8+33.24	33.50' LT.	635.11

BENCHMARKS:
 "□" CUT ON INLET SW CORNER OF RATLIFF & ADDISON RD. ELEV. = 637.20
 "□" CUT ON INLET SE CORNER OF AIRPORT PKWY. & QUORUM DR. ELEV. = 631.15



NO. REVISION BY DATE	DESIGNED JPS DRAWN JRP CHECKED	TOWN OF ADDISON	SCALE HORIZ 1"=20' VERT 1"=2' DATE APR 1999	 915 Florence Street 2001 West Irving Blvd. Fort Worth, Texas 76102 Irving, Texas 75061 (817) 336-5773 (972) 254-1765	 Date: 14 Apr 99	TOWN OF ADDISON, TEXAS KELLER SPRINGS ROAD/QUORUM DRIVE PAVING IMPROVEMENTS PLAN & PROFILE STA. 5+90 TO END	TNP PROJECT ADD97277 SHEET 2 OF 20
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GRAPHIC SCALE



BENCHMARKS:
 □ CUT ON INLET SW CORNER OF RATLIFF & ADDISON RD. ELEV. = 637.20
 □ CUT ON INLET SE CORNER OF AIRPORT PKWY. & QUORUM DR. ELEV. = 631.15

MATCH LINE STA. 5+90 (SEE SHEET 4)

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TOWN OF ADDISON

SCALE
 HORIZ 1"=20'
 VERT N/A
 DATE APR 1999

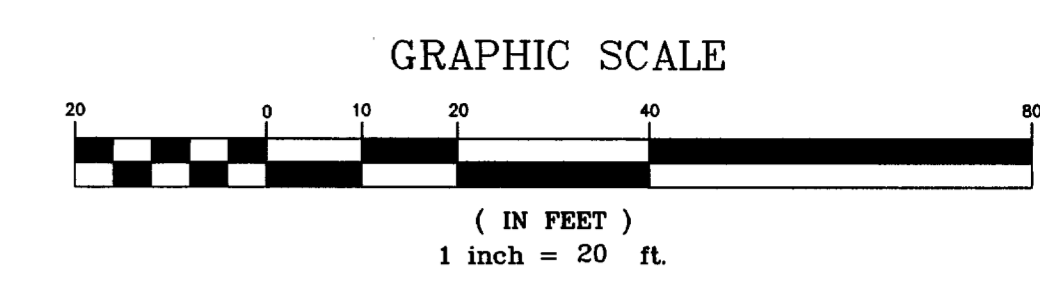
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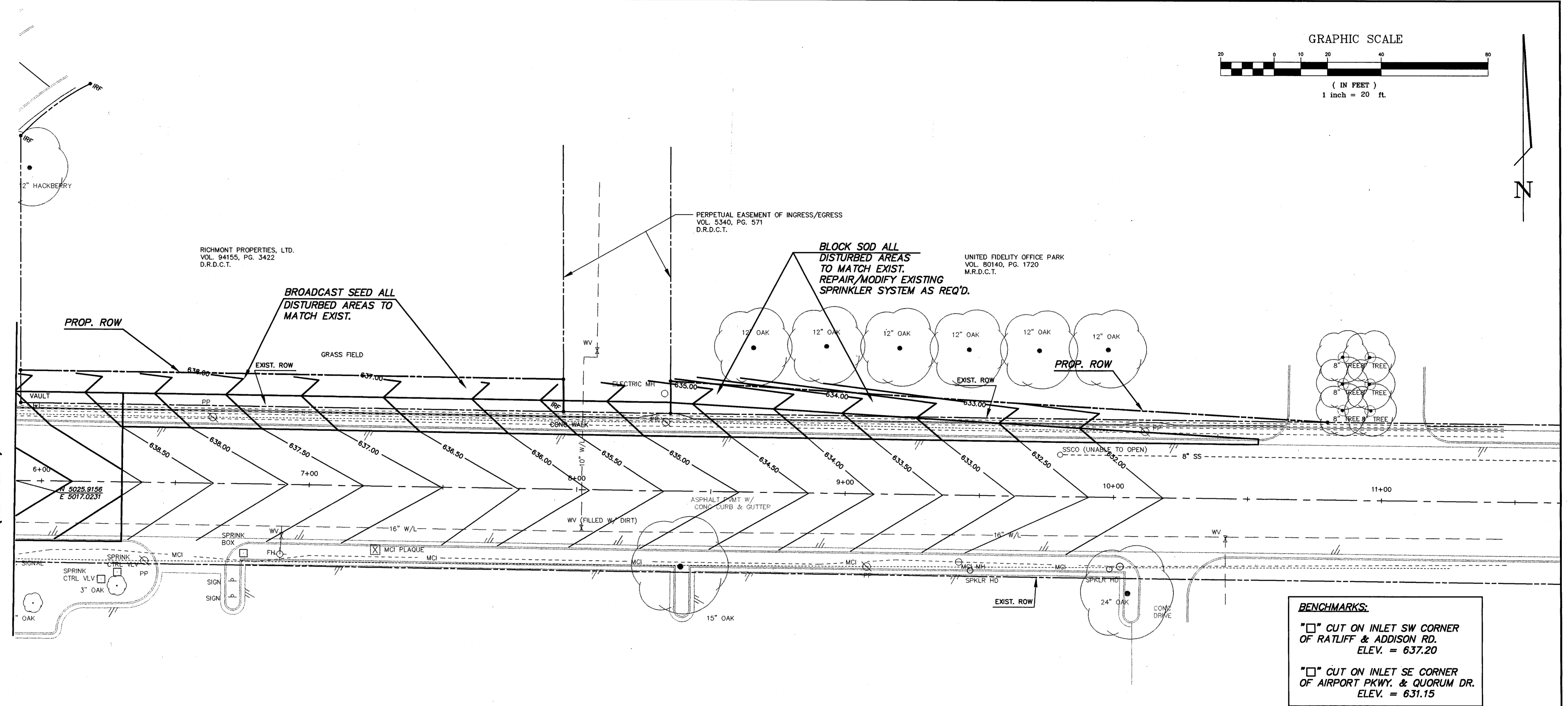
REGISTERED PROFESSIONAL ENGINEER
 DELVIN BLACK
 31640
 Date: 14Apr99

TOWN OF ADDISON, TEXAS
 KELLER SPRINGS ROAD/QUORUM DRIVE
GRADING IMPROVEMENTS
 STA. 0+00 TO STA. 5+90

TNP PROJECT ADD97277
 SHEET **3** OF 20



MATCH LINE STA. 5+90
(SEE SHEET 3)



BENCHMARKS:

"□" CUT ON INLET SW CORNER OF RATLIFF & ADDISON RD. ELEV. = 637.20

"□" CUT ON INLET SE CORNER OF AIRPORT PKWY. & QUORUM DR. ELEV. = 631.15

ASPHALT PARKING LOT
W/ CONC CURB & GUTTER

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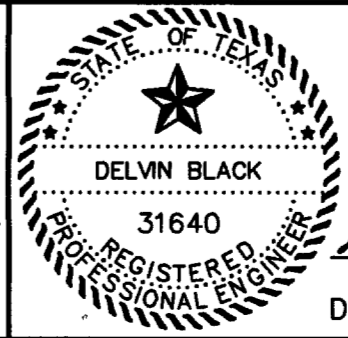
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TOWN OF
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1" = 20'
VERT
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DATE
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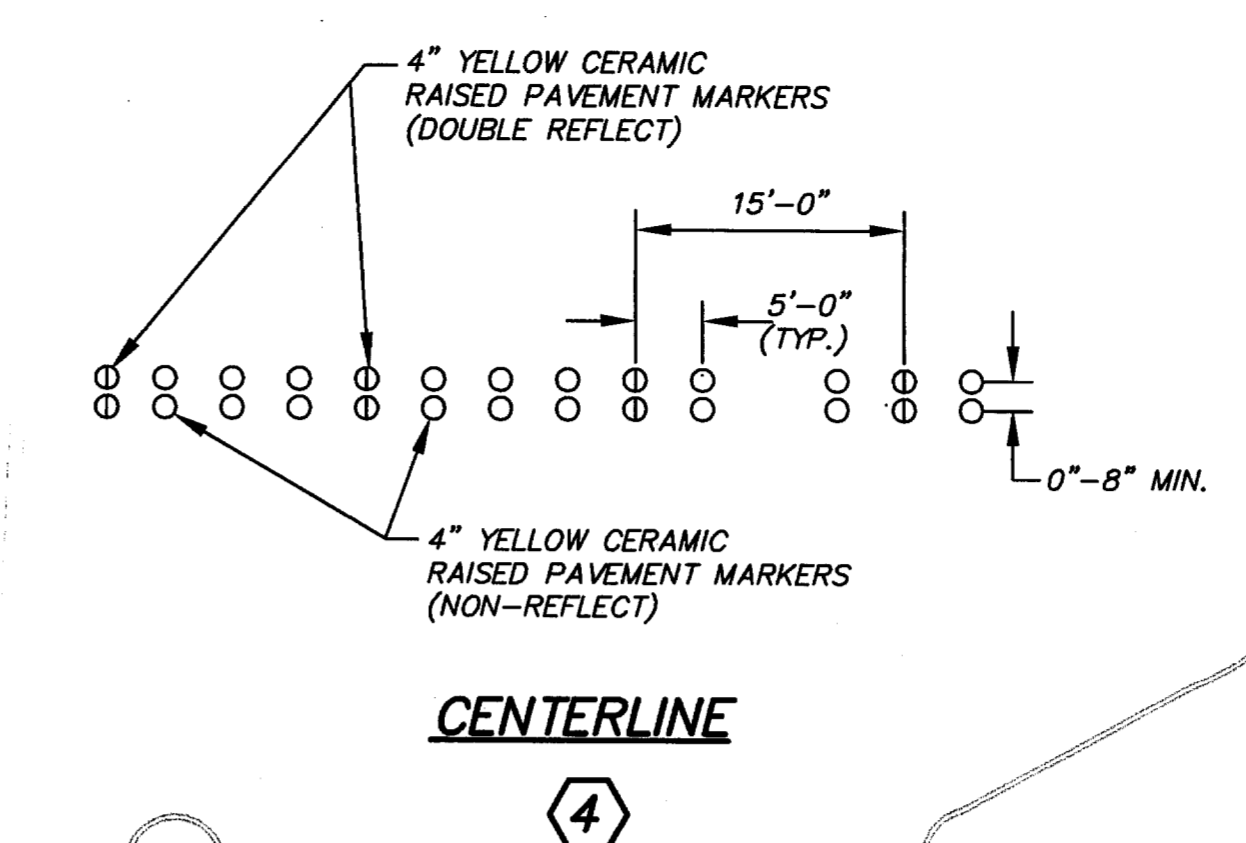
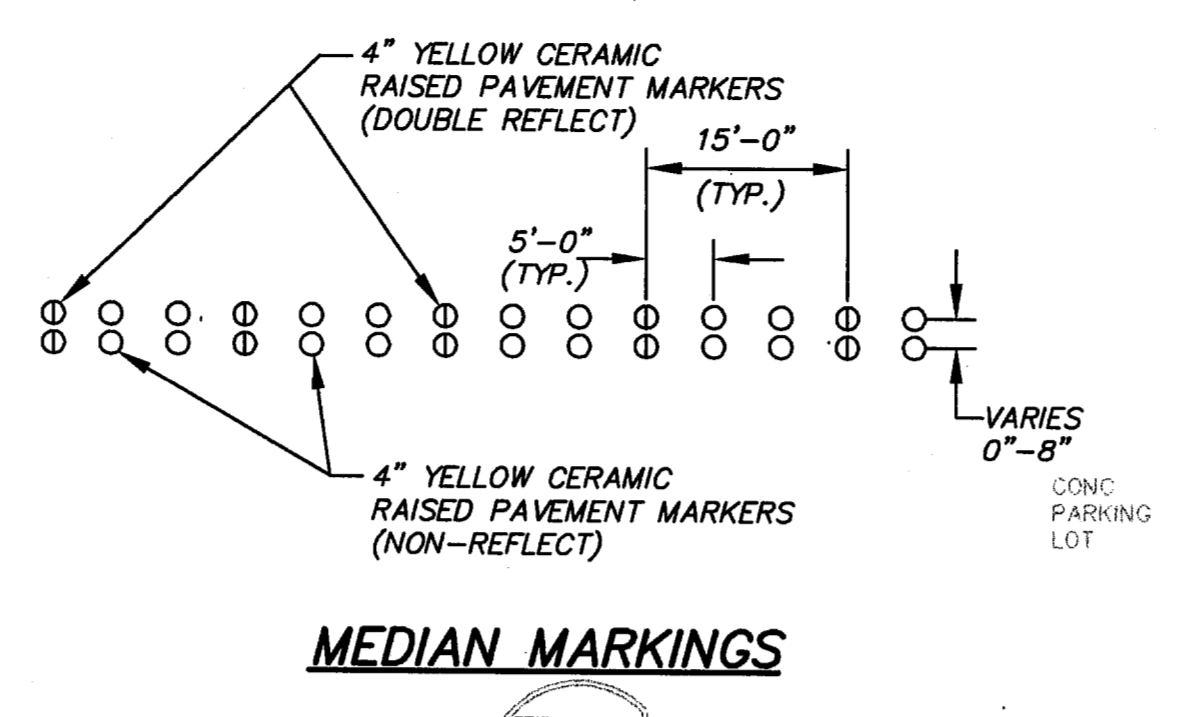
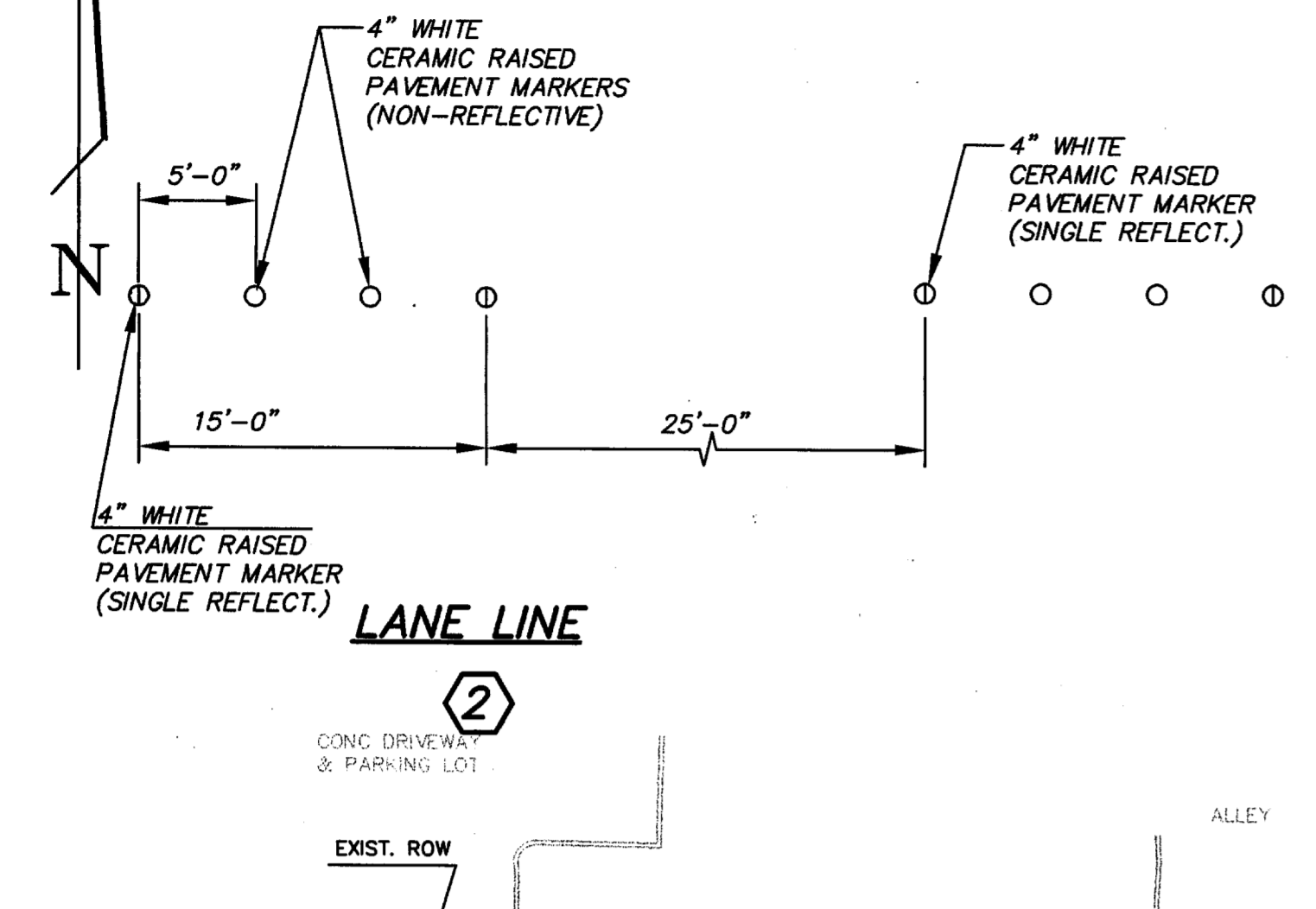
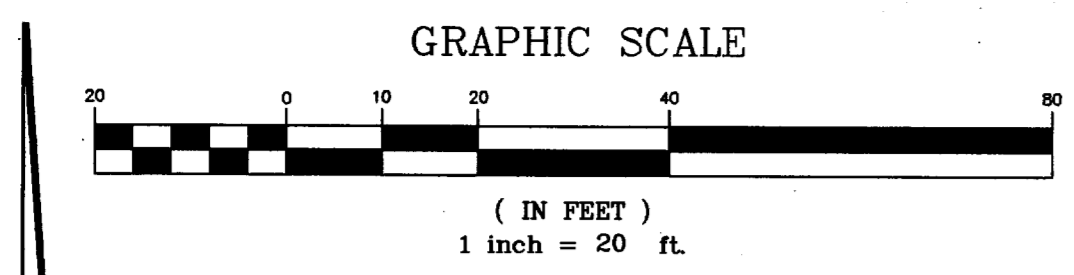
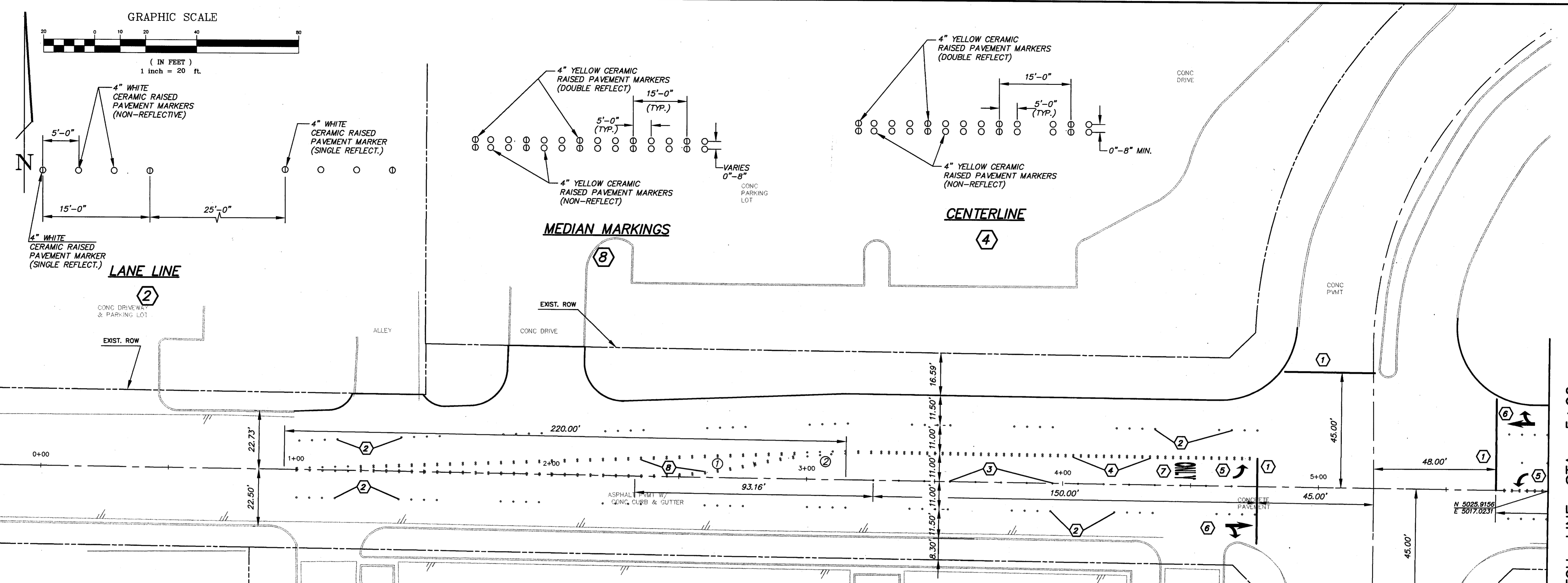
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Delvin Black P.E.
Date: 14 Apr 99

TOWN OF ADDISON, TEXAS
KELLER SPRINGS ROAD/QUORUM DRIVE
GRADING IMPROVEMENTS
STA. 5+90 TO END

TNP PROJECT
ADD97277
SHEET
4
OF
20



LEGEND

- ① 24" STOP BAR (SOLID WHITE ALKYD THERMOPLASTIC)
- ② LANE LINE (4" WHITE CERAMIC RAISED PAVEMENT MARKERS)
- ③ LEFT TURN LANE BAY DIVIDE LINE (4" WHITE CERAMIC RAISED PAVEMENT MARKERS)
- ④ CENTER LINE (4" YELLOW CERAMIC RAISED PAVEMENT MARKERS)
- ⑤ LEFT TURN ARROW (SOLID WHITE ALKYD THERMOPLASTIC)
- ⑥ THRU/RIGHT ARROW (SOLID WHITE ALKYD THERMOPLASTIC)
- ⑦ "ONLY" (SOLID WHITE ALKYD THERMOPLASTIC)
- ⑧ MEDIAN MARKINGS (4" YELLOW CERAMIC RAISED PAVEMENT MARKERS)

- NOTES:**
- TRAFFIC BUTTONS SHALL BE FROM A SINGLE MANUFACTURER.
 - TRAFFIC BUTTONS SHALL SIT ON EPOXY "CUSHION". BUTTONS SHALL NOT BE IN DIRECT CONTACT WITH THE PAVEMENT.
 - EPOXY SHALL BE IN ACCORDANCE WITH TXDOT ITEM 575 TYPE I & I-M.
 - CARE SHOULD BE USED WHEN REMOVING EXISTING BUTTONS TO MINIMIZE DAMAGE TO ASPHALT PAVEMENT. DAMAGE TO ASPHALT PAVEMENT SHALL BE REPAIRED BY CONTRACTOR AT HIS EXPENSE.
 - CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC BUTTONS THAT ARE THE SAME AS THE EXISTING ON KELLER SPRINGS ROAD. THE PROPOSED LAYOUT PATTERN SHALL MATCH THE EXISTING LAYOUT PATTERNS ON KELLER SPRINGS ROAD.
 - SEE SIGNAL MISCELLANEOUS DETAILS FOR TURN ARROW LAYOUT.
 - DIMENSIONS ARE TO BACK OF CURB OR CENTER OF PAVEMENT MARKINGS.
 - SEE PAVING PLAN/PROFILE SHEETS FOR HORIZONTAL LAYOUT OF CENTERLINE MARKERS AND LEFT TURN BAY DIVIDE LINE MARKERS.

CURVE DATA

① Δ=13'28"05" R=200.00' L=47.01' T=23.61'	② Δ=13'28"05" R=200.00' L=47.01' T=23.61'
---	---

24" WIDE SOLID WHITE THERMOPLASTIC STRIPE	4" WHITE SINGLE REFLECT. BUTTON (TY. 1-C) LT. TURN	4" WHITE SINGLE REFLECT. BUTTON (TY. 1-C) MAIN LANES	4" WHITE BUTTON (TYPE W)	4" YELLOW BUTTON (TYPE Y)	4" YELLOW DOUBLE REFLECT. BUTTON (TY. II A-A)	8 FT. LONG WHITE THERMOPLASTIC TURN ARROW	WHITE THERMOPLASTIC THRU/RIGHT ARROW	WHITE THERMOPLASTIC "ONLY"
133 L.F.	30 EA.	100 EA.	100 EA.	455 EA.	197 EA.	2 EA.	2 EA.	2 EA.

MATCH LINE STA. 5+90 (SEE SHEET 6)

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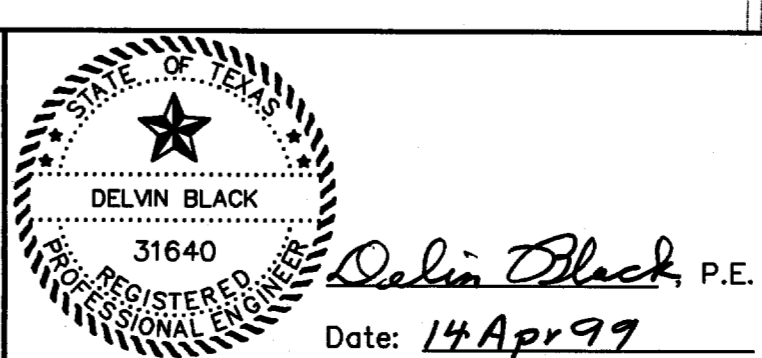
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TOWN OF ADDISON

SCALE
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 VERT N/A
 DATE APR 1999

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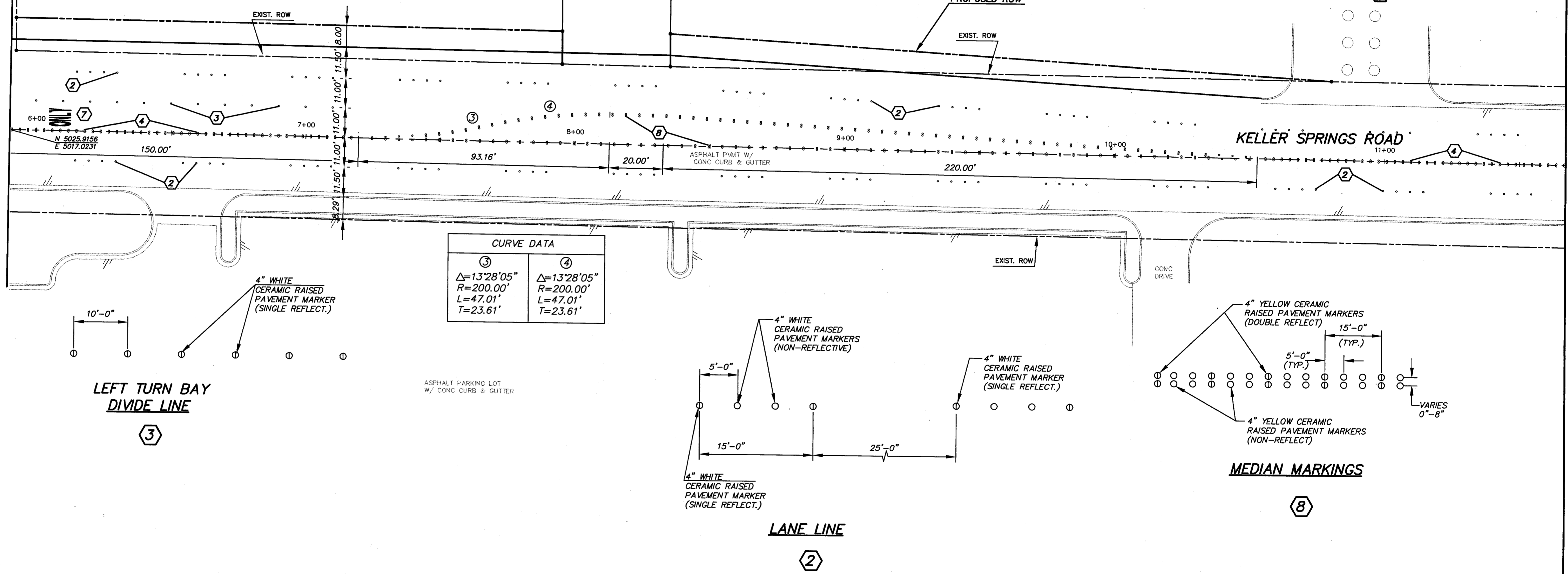


TOWN OF ADDISON, TEXAS
 KELLER SPRINGS ROAD/QUORUM DRIVE
PAVEMENT MARKINGS
 STA. 0+00 TO STA. 5+90

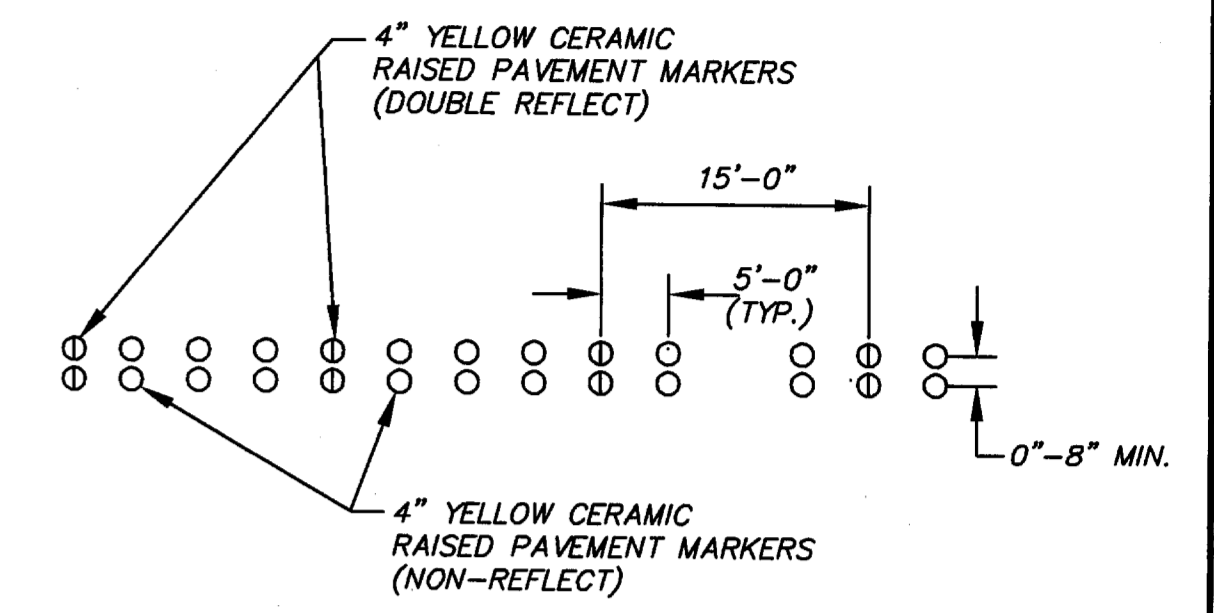
TNP PROJECT ADD97277
 SHEET 5 OF 20

LEGEND	
①	24" STOP BAR (SOLID WHITE ALKYD THERMOPLASTIC)
②	LANE LINE (4" WHITE CERAMIC RAISED PAVEMENT MARKERS)
③	LEFT TURN LANE BAY DIVIDE LINE (4" WHITE CERAMIC RAISED PAVEMENT MARKERS)
④	CENTER LINE (4" YELLOW CERAMIC RAISED PAVEMENT MARKERS)
⑤	LEFT TURN ARROW (SOLID WHITE ALKYD THERMOPLASTIC)
⑥	THRU/RIGHT ARROW (SOLID WHITE ALKYD THERMOPLASTIC)
⑦	"ONLY" (SOLID WHITE ALKYD THERMOPLASTIC)
⑧	MEDIAN MARKINGS (4" YELLOW CERAMIC RAISED PAVEMENT MARKERS)

MATCH LINE STA. 5+90
(SEE SHEET 5)



CURVE DATA	
③	④
$\Delta=13^{\circ}28'05''$	$\Delta=13^{\circ}28'05''$
$R=200.00'$	$R=200.00'$
$L=47.01'$	$L=47.01'$
$T=23.61'$	$T=23.61'$



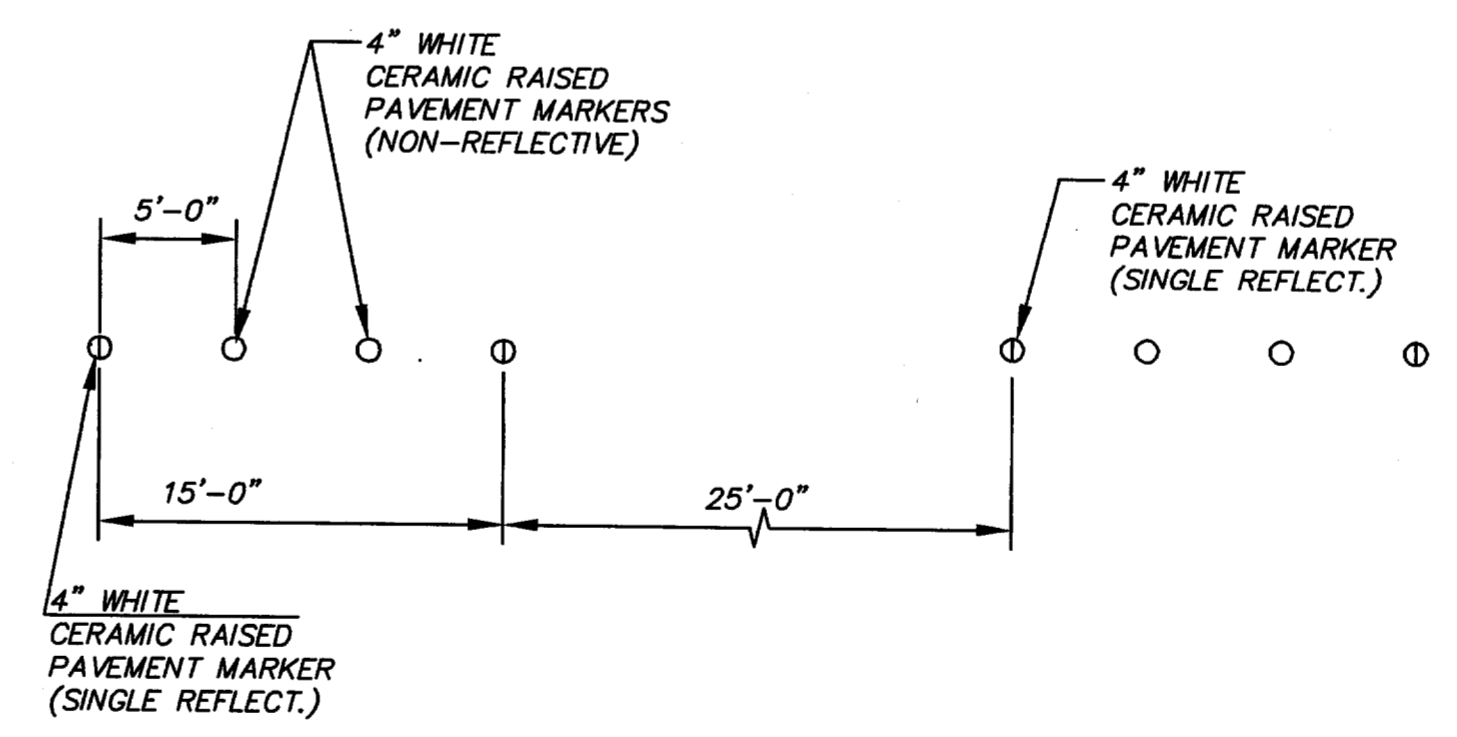
CENTERLINE

④



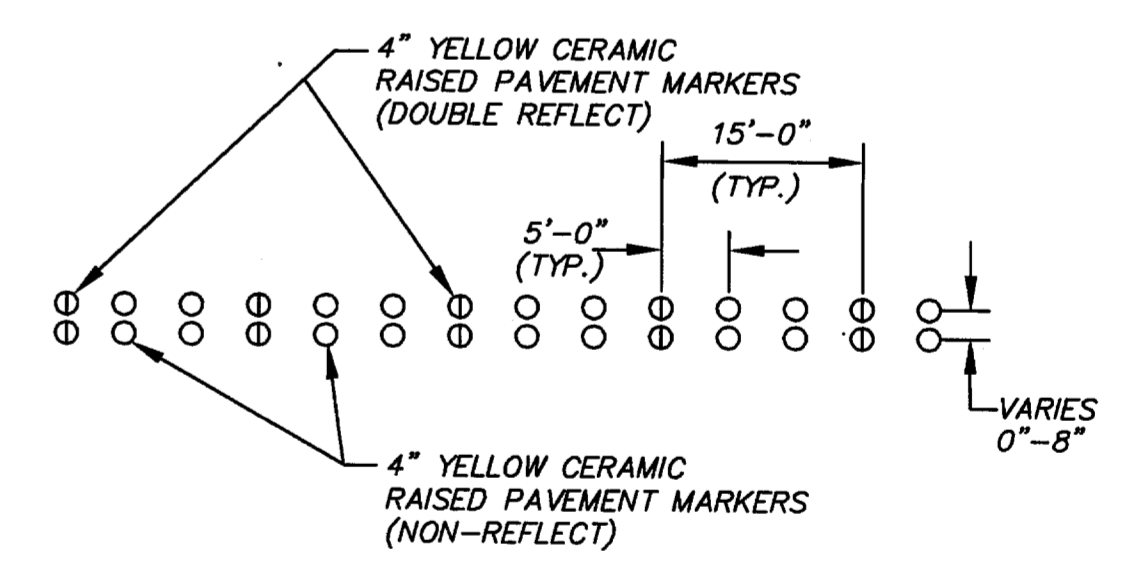
LEFT TURN BAY DIVIDE LINE

③



LANE LINE

②



MEDIAN MARKINGS

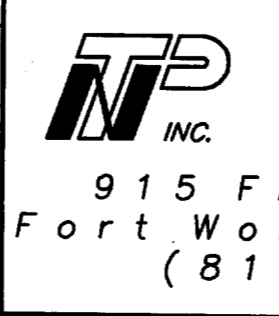
⑧

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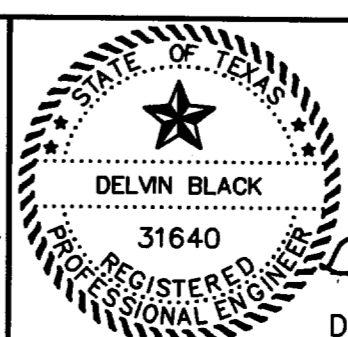
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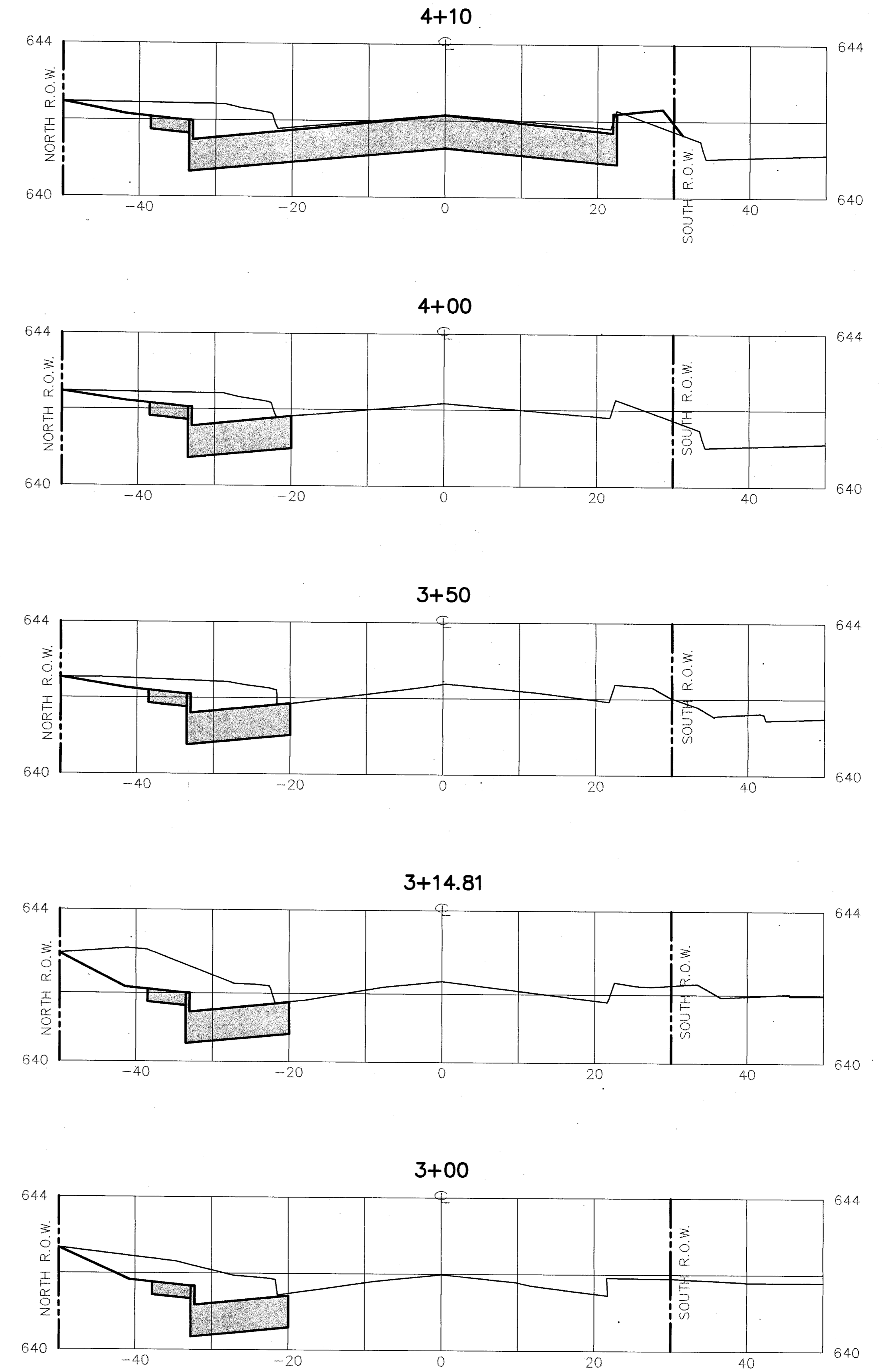
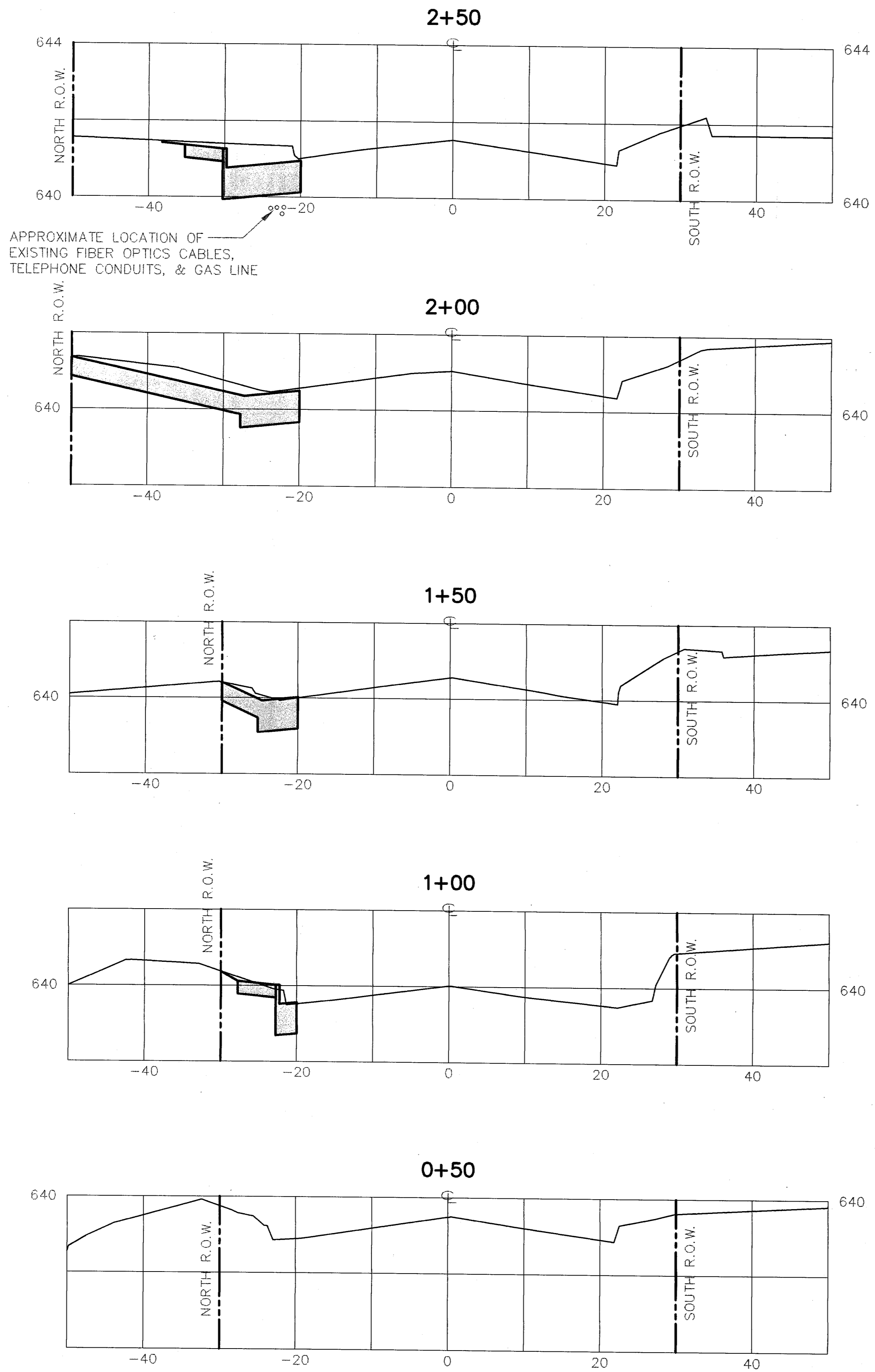
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INC. CONSULTING ENGINEERS
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2001 West Irving Blvd Irving, Texas 75061 (972) 254-1765



Delvin Black, P.E.
Date: 14 Apr 99

TOWN OF ADDISON, TEXAS
KELLER SPRINGS ROAD/QUORUM DRIVE
PAVEMENT MARKINGS
STA. 5+90 TO END

TNP PROJECT
ADD97277
SHEET
6
OF
20



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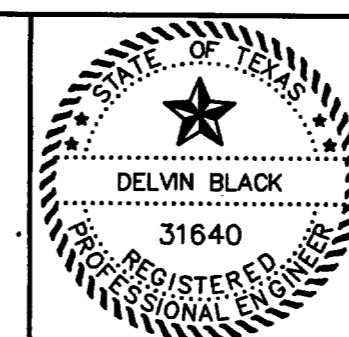
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TOWN OF
ADDISON

SCALE
HORIZ
1" = 10'
VERT
1" = 2'
DATE
APR 1999



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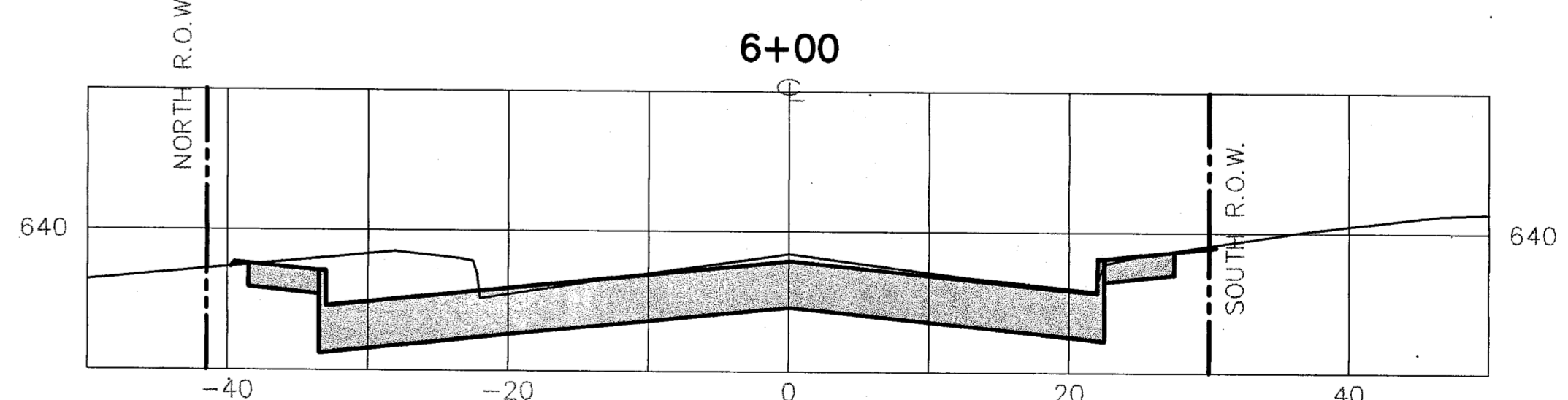
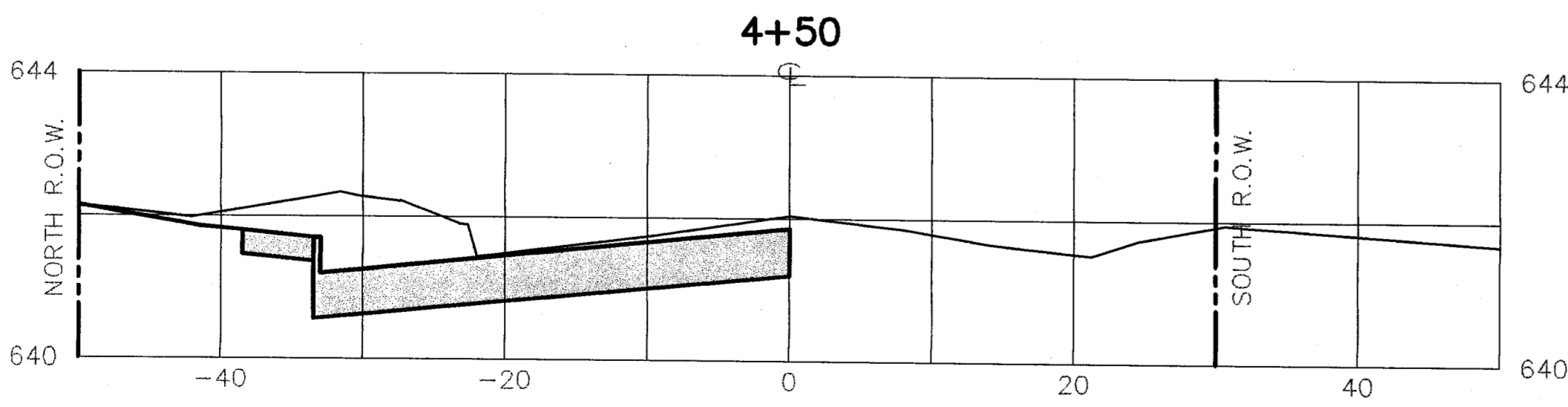
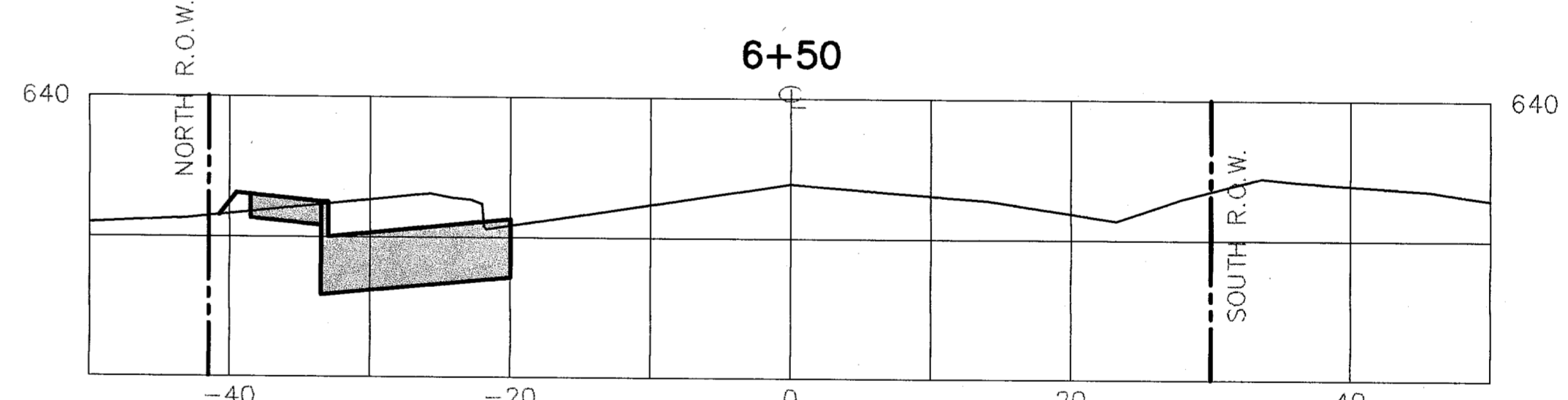
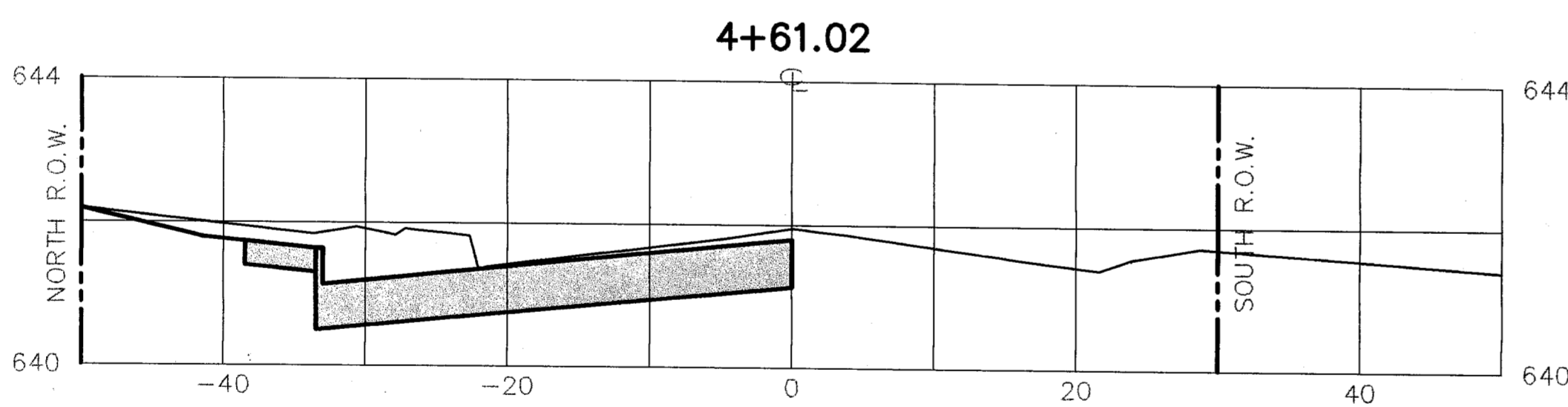
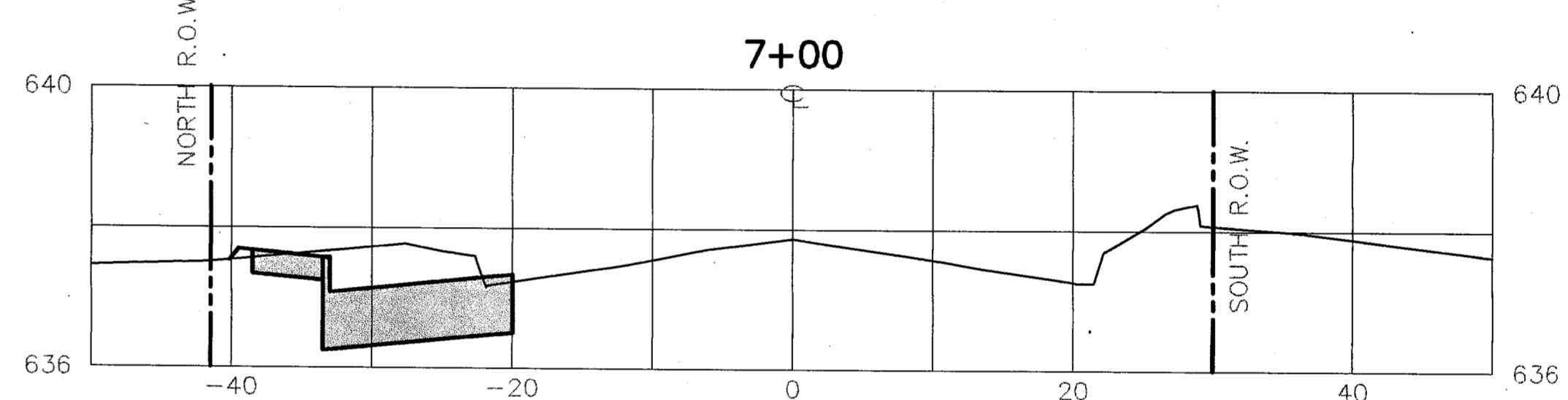
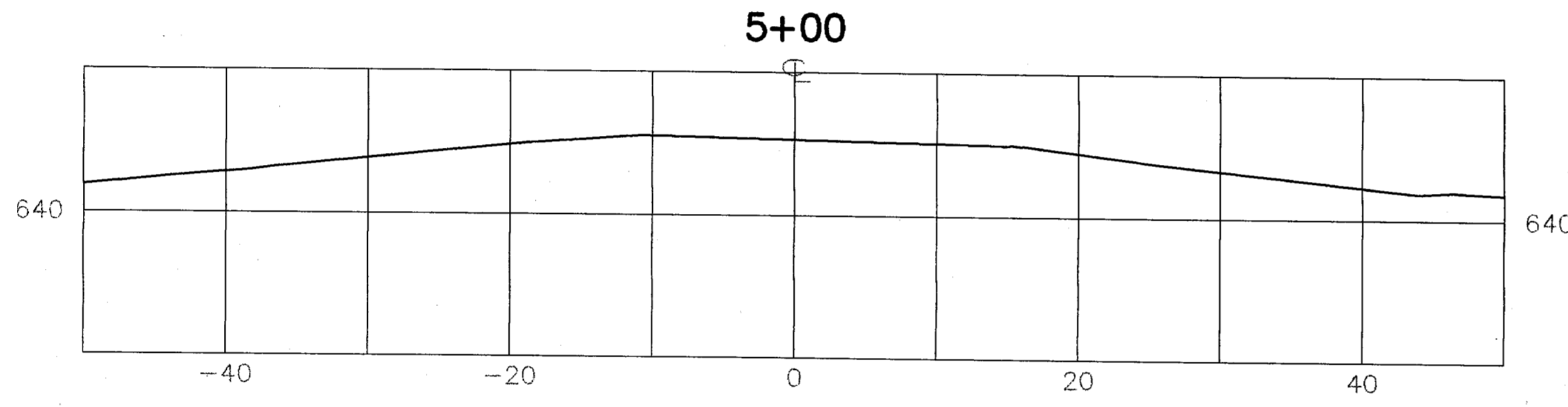
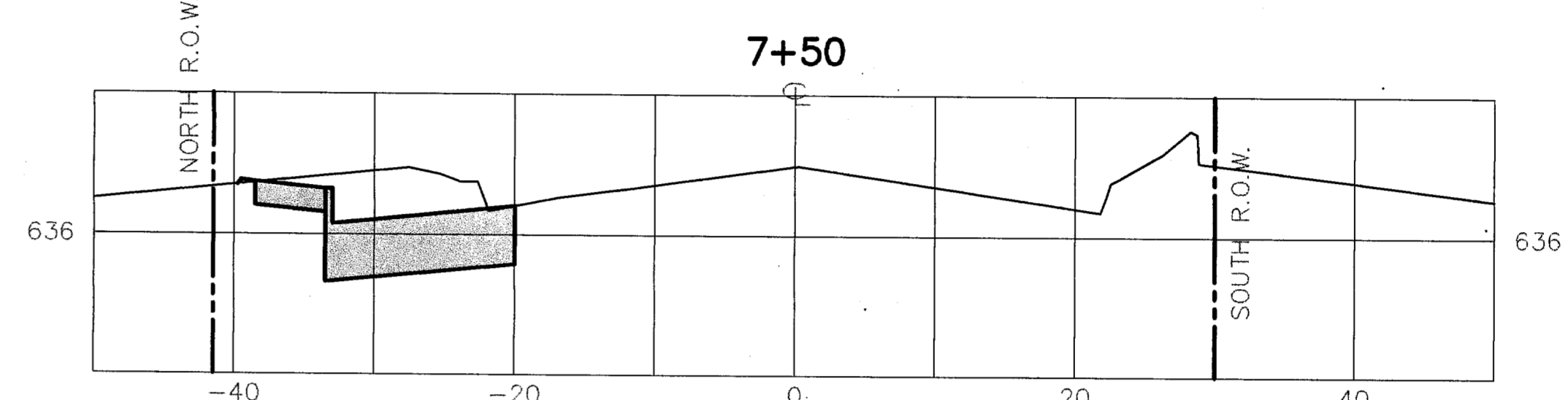
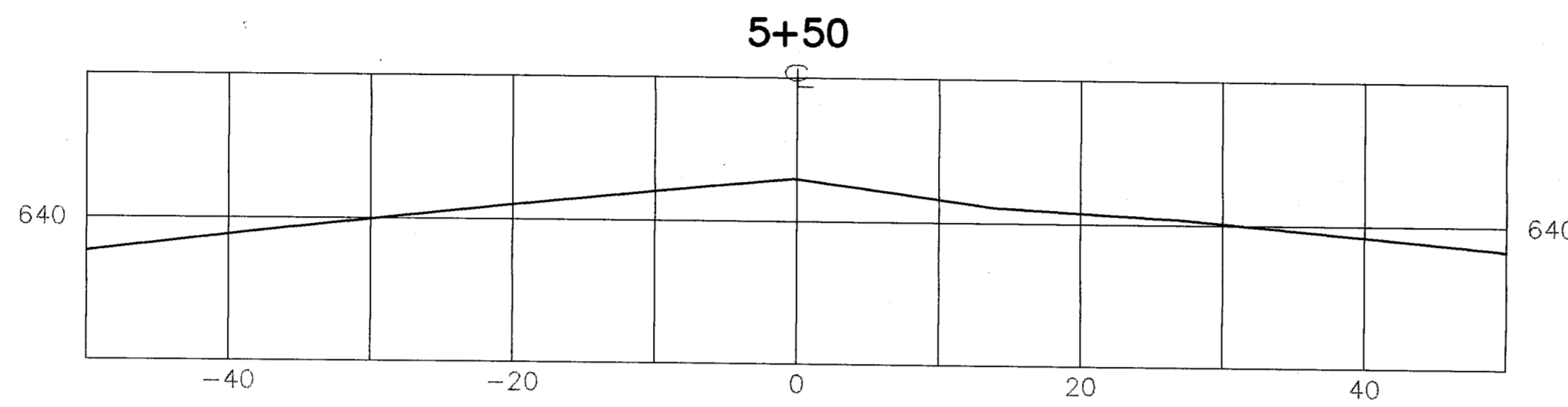
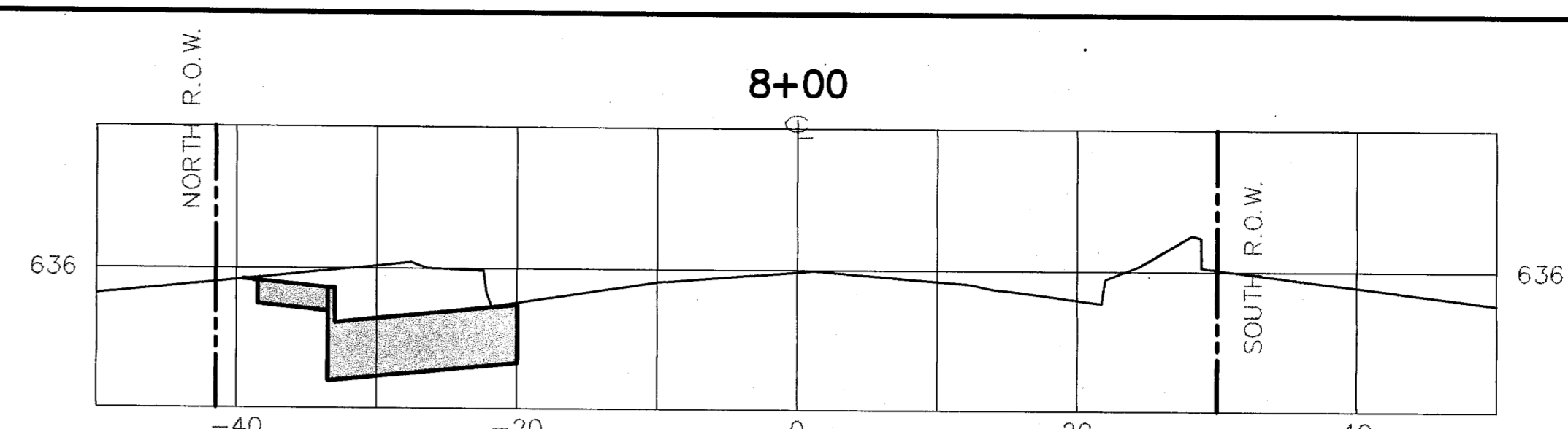
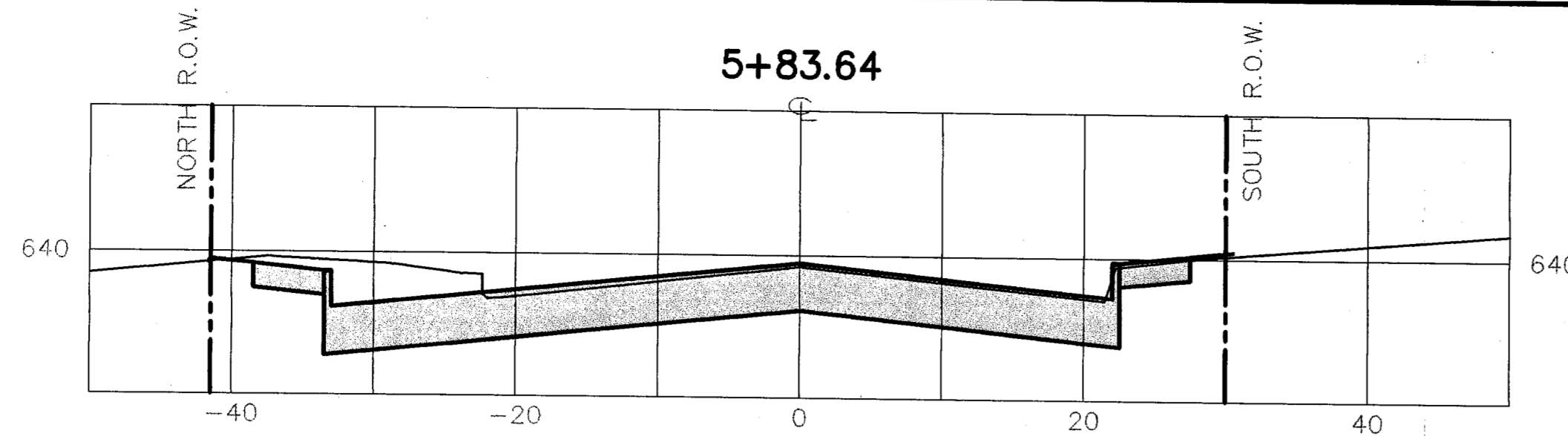


Delvin Black, P.E.
Date: 14 Apr 99

TOWN OF ADDISON, TEXAS
KELLER SPRINGS ROAD/QUORUM DRIVE
INTERSECTION IMPROVEMENTS
CROSS SECTIONS
STA. 0+50 TO STA. 4+10

TNP PROJECT
ADD92777
SHEET
7
OF
20

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NO.	REVISION	BY	DATE

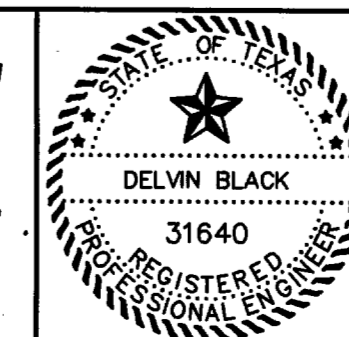
DESIGNED
JPS
DRAWN
JRP
CHECKED

TOWN OF
ADDISON

SCALE
HORIZ
1" = 10'
VERT
1" = 2'
DATE
APR 1999



TEAGUE NALL AND PERKINS
CONSULTING ENGINEERS
915 Florence Street Fort Worth, Texas 76102 (817) 336-5773
2001 West Irving Blvd. Irving, Texas 75061 (972) 254-1765

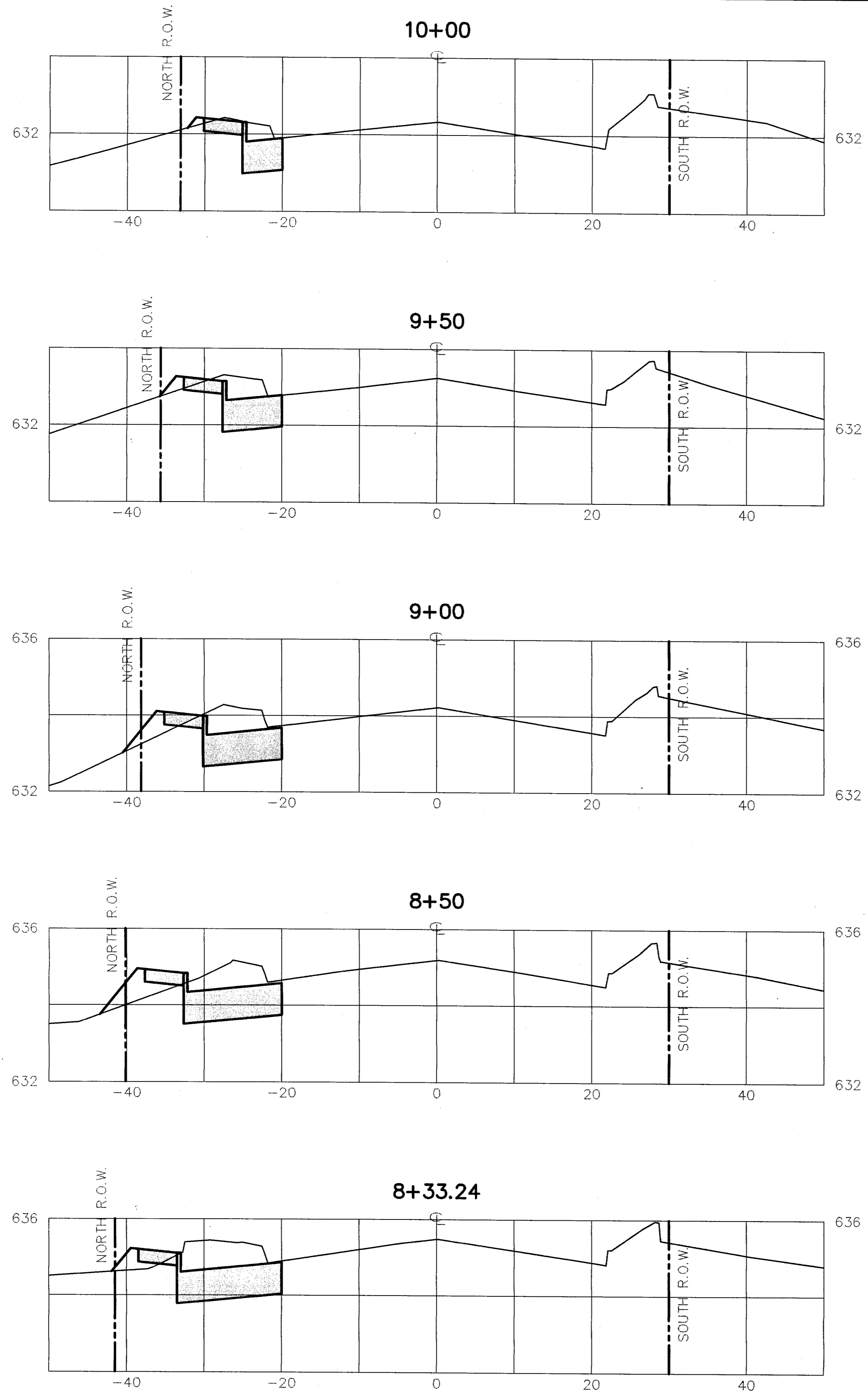


Delvin Black, P.E.
Date: 14 Apr 99

TOWN OF ADDISON, TEXAS
KELLER SPRINGS ROAD/QUORUM DRIVE
INTERSECTION IMPROVEMENTS
CROSS SECTIONS
STA. 4+50 TO STA. 8+00

TNP PROJECT
ADD97277
SHEET
8
OF
20

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NO.	REVISION	BY	DATE

DESIGNED
JPS
 DRAWN
JRP
 CHECKED

TOWN OF
ADDISON

SCALE
 HORIZ
 1" = 10'
 VERT
 1" = 2'
 DATE
 APR 1999



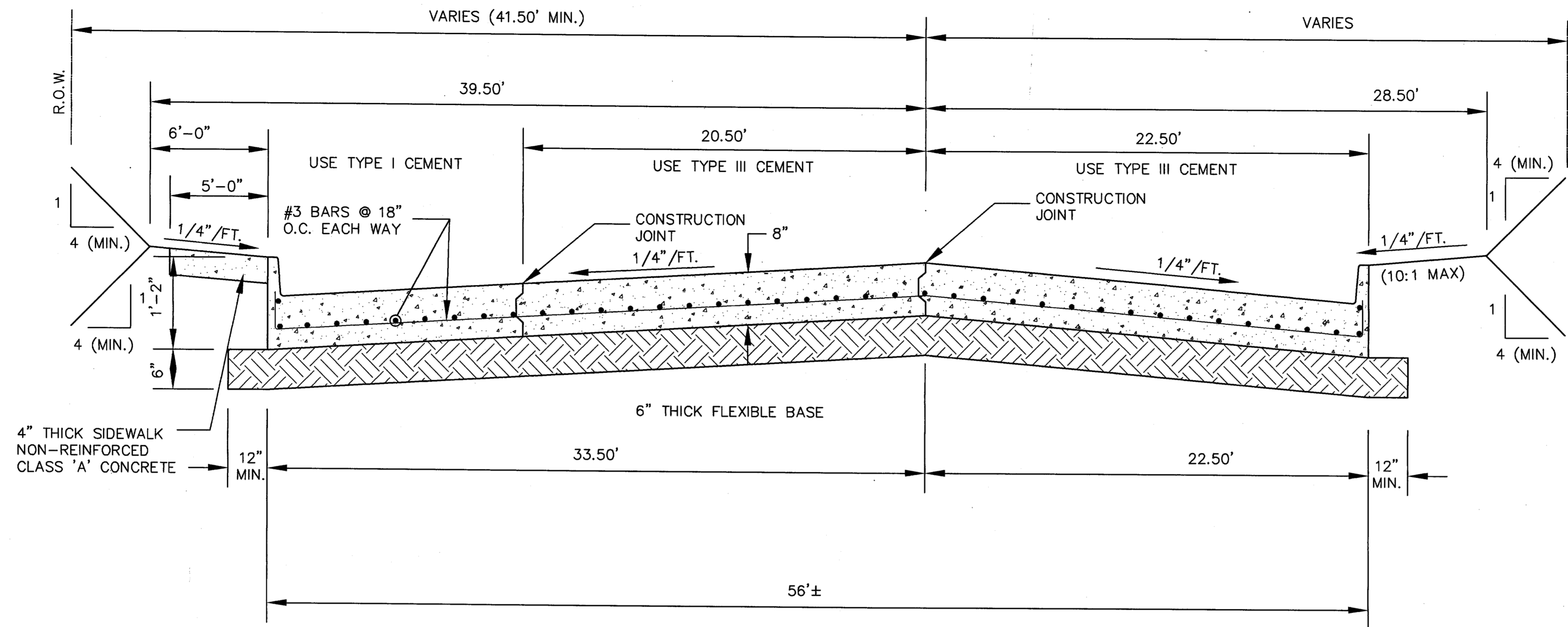
TEAGUE NALL AND PERKINS
 CONSULTING ENGINEERS
 915 Florence Street Fort Worth, Texas 76102
 (817) 336-5773
 2001 West Irving Blvd. Irving, Texas 75061
 (972) 254-1765



Date: *14 Apr 99*
 Delvin Black, P.E.

TOWN OF ADDISON, TEXAS
 KELLER SPRINGS ROAD/QUORUM DRIVE
INTERSECTION IMPROVEMENTS
 CROSS SECTIONS
 STA. 8+50 TO STA. 10+00

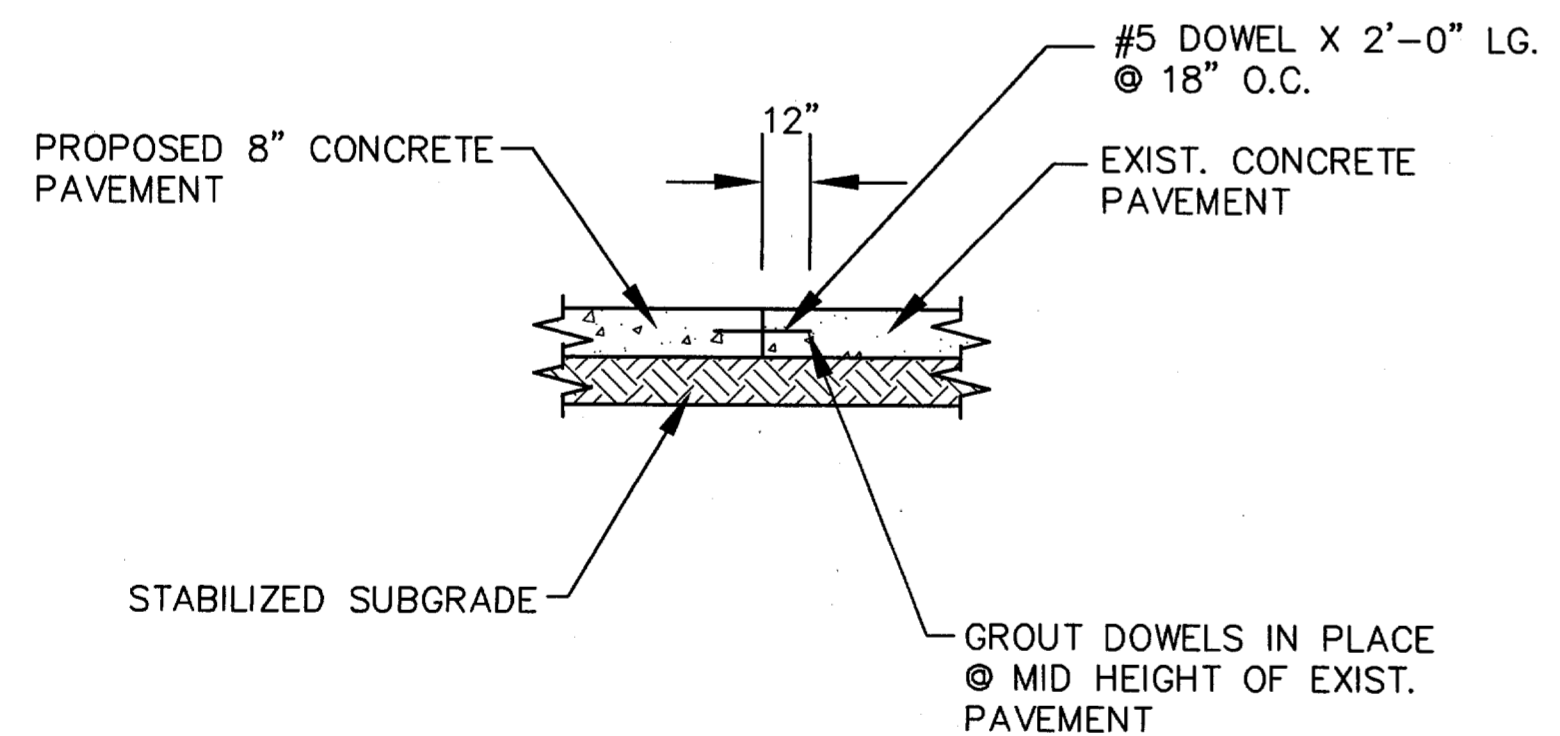
TNP PROJECT
 ADD97277
 SHEET
9
 OF
 20



NOTE:
 THE CONCRETE MIX USING TYPE III CEMENT SHALL BE DESIGNED TO ALLOW THE SECTION TO BE OPENED TO TRAFFIC AFTER A MAXIMUM CURE TIME OF 12 HOURS.

TYPICAL PAVEMENT SECTION

SCALE: HOR. 1/4" = 1'
 VERT. 1" = 1'



CONSTRUCTION JOINT TO EXISTING CONCRETE PAVEMENT

SCALE: 1/4" = 1'

c:\prou-h14\add97277\cad\0-tailse.dwg Tue Apr 13 16:15:21 1999 CADMAN

NO.	REVISION	BY	DATE

DESIGNED: **DEB**
 DRAWN: **JPS**
 CHECKED: **JRP**

TOWN OF **ADDISON**

SCALE: AS SHOWN
 DATE: APR 1999

TEAGUE NALL AND PERKINS
 CONSULTING ENGINEERS
 915 Florence Street Fort Worth, Texas 76102 (817) 336-5773
 2001 West Irving Blvd. Irving, Texas 75061 (972) 254-1765

PROFESSIONAL ENGINEER
 DELVIN BLACK
 31640
 Date: 14 Apr 99

TOWN OF ADDISON, TEXAS
 KELLER SPRINGS ROAD/QUORUM DRIVE
INTERSECTION IMPROVEMENTS
 MISCELLANEOUS DETAILS
 SHEET 2

TNP PROJECT
 ADD97277
 SHEET
11
 OF
 20

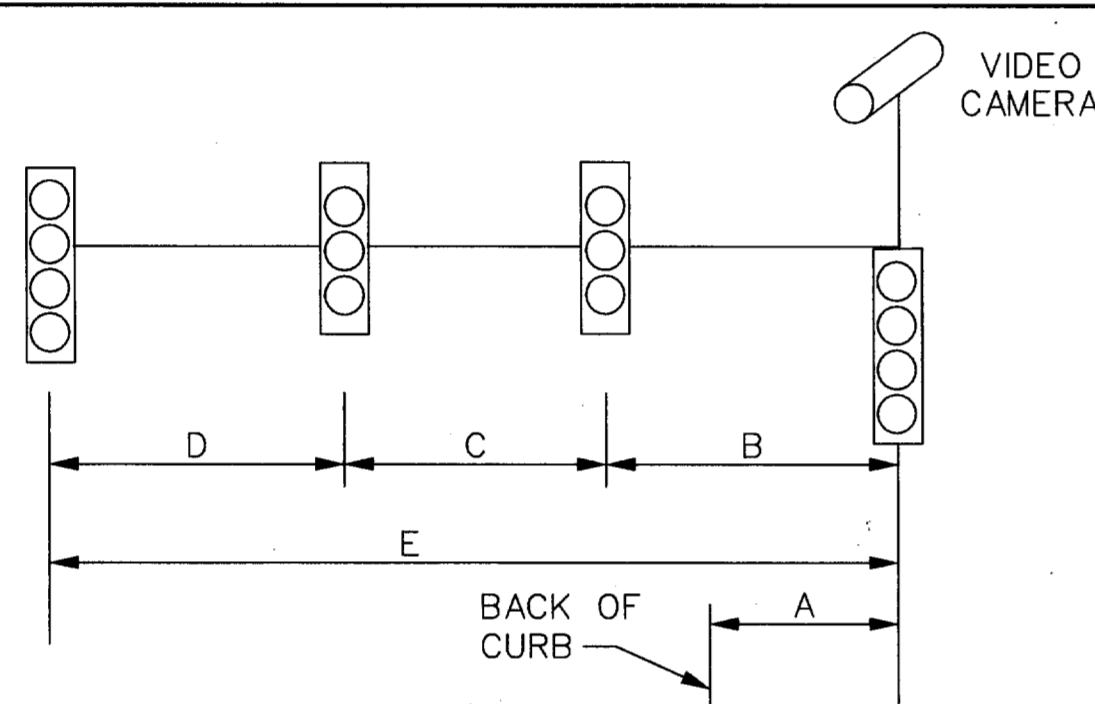
CONDUIT RUNS

RUN NO.	QUANTITY	SIZE	TYPE	METHOD	*6 XHHW	*6 BARE	COAX CABLE	4 CNDR OPTICOM	3 CNDR (VIDEO)	12 CNDR	19 CNDR	CONDUIT LENGTH	CABLE LENGTH	RUN NO.
A	3	3"	PVC	Trench	2	1	4	4	4		4	20	25	A
B	1	3"	PVC	Trench		1	1	2	1		1	9	14	B
C	1	4"	PVC	Bored		1	2	1	2		2	84	94	C
D	1	3"	PVC	Trench		1	1	1	1		1	7	12	D
E	1	4"	PVC	Bored		1	1	1	1		1	94	104	E
F	1	3"	PVC	Trench		1	1	1	1		1	9	14	F
G	1	4"	PVC	Bored								91	101	G
H	1	3"	PVC	Trench		1	1	1	1		1	9	14	H
I	1	4"	PVC	Bored		1	1	1	1		1	93	103	I
J	1	1"	RM	Trench	2	1						20	25	J
TOTAL (LF)					100	405	549	457	549		549			

CABLE TERMINATION CHART

CABLE CONDUCTOR	T-1 (19 CNDR)		T-2 (19 CNDR)		T-3 (19 CNDR)		T-4 (19 CNDR)	
	S.H. NO.	INDICATION	S.H. NO.	INDICATION	S.H. NO.	INDICATION	S.H. NO.	INDICATION
BLACK	1	← Y	4	← Y	7	← Y	10	← Y
WHITE		COMMON		COMMON		COMMON		COMMON
RED	1-3	R	4-6	R	7-9	R	10-12	R
GREEN	1-3	G	4-6	G	7-9	G	10-12	G
ORANGE	1-3	Y	4-6	Y	7-9	Y	10-12	Y
BLUE	1	← G	4	← G	7	← G	10	← G
WHT/BLK	SPARE		SPARE		SPARE		SPARE	
RED/BLK	13	DW	15	DW	17	DW	19	DW
GRN/BLK	13	W	15	W	17	W	19	W
ORN/BLK	SPARE		SPARE		SPARE		SPARE	
BLUE/BLK	SPARE		SPARE		SPARE		SPARE	
BLK/WHT	PB 13	Ø2	PB 15	Ø4	PB 17	Ø6	PB 19	Ø8
RED/WHT	14	DW	16	DW	18	DW	20	DW
GRN/WHT		PB COM		PB COM		PB COM		PB COM
BLUE/WHT	14	W	16	W	18	W	20	W
BLK/RED	21	R	SPARE		SPARE		SPARE	
WHT/RED	PB 14	Ø4	PB 16	Ø6	PB 18	Ø8	PB 20	Ø2
BLUE/RED	21	Y	SPARE		SPARE		SPARE	
ORN/RED	21	G	SPARE		SPARE		SPARE	

SIGNAL HEAD AND POLE PLACEMENT



POLE NUMBER	A	B	C	D	E	FND
T-1	6	13	11	11	35	30-A
T-2	6	16	12	12	40	36-A
T-3	10	18	11	11	40	36-A
T-4	9	16	12	12	40	36-A

POLE NUMBER	4-CNDR	5-CNDR	7-CNDR	COAX	3-CNDR
T-1	70	105	60	35	35
T-2	45	112	65	35	35
T-3	50	115	65	35	35
T-4		112	65	35	35
TOTAL (LF)	165	444	255	140	140

SIGNAL HEADS

NO	TYPE	PHASE	BACKPLATE		SIGNAL HEAD		PED SIG SEC
			3 SEC	4 SEC	3 SEC	4 SEC	
1	V4LT*	Ø7-Ø4		1		1	
2	V3	Ø4	1		1		
3	V3	Ø4	1		1		
4	V4LT*	Ø1-Ø6		1		1	
5	V3	Ø6	1		1		
6	V3	Ø6	1		1		
7	V4LT*	Ø3-Ø8		1		1	
8	V3	Ø8	1		1		
9	V3	Ø8	1		1		
10	V4LT*	Ø5-Ø2		1		1	
11	V3	Ø2	1		1		
12	V3	Ø2	1		1		
13,20	PED	Ø2					2
14,15	PED	Ø4					2
16,17	PED	Ø6					2
18,19	PED	Ø8					2
21	V3	Ø2	1		1		
TOTALS			9	4	9	4	8

* -Use green/yellow fiber optic turn arrow.

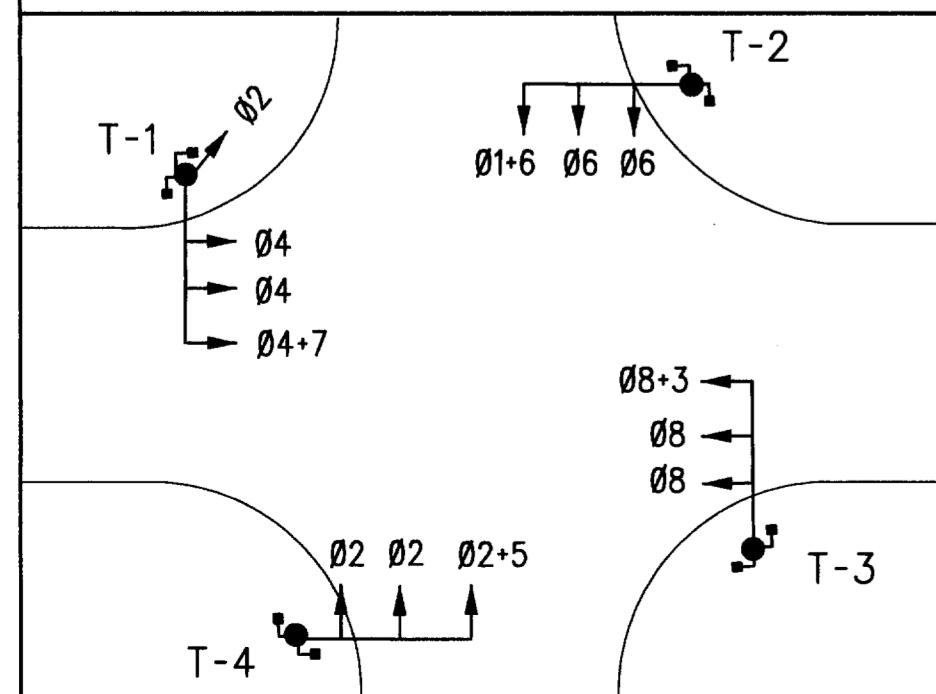
SIGN SUMMARY

LOCATION	SIGN TYPE	DESCRIPTION	SIZE
T-1 ARM	R10-12(S)	LEFT TURN YIELD	24"x30"
T-2 ARM	R10-12(S)	LEFT TURN YIELD	24"x30"
T-3 ARM	R10-12(S)	LEFT TURN YIELD	24"x30"
T-4 ARM	R10-12(S)	LEFT TURN YIELD	24"x30"
T-2 ARM	R3-4	NO U TURN	24"x24"
T-4 ARM	R3-4	NO U TURN	24"x24"

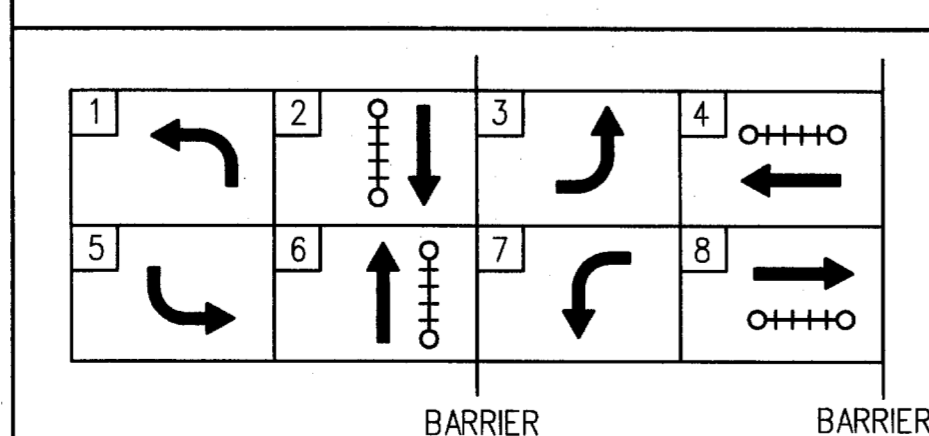
TYPE	EA
A	3
C	1

SIZE	TYPE	LENGTH (LF)
1" RM	Trench	20
3" PVC	Trench	94
4" PVC	Bore	362

SIGNAL HEAD PHASING



NEMA PHASE DIAGRAM



NOTES: Phases 1, 3, 5, + 7 are protected/permissive left turn phases.

4/15/99	ADDED SIGNAL HEAD 21 AND RELATED DATA CHANGES TO CABLE TERMINATION, SIGNAL HEAD, AND PHASING CHARTS	CWW/RWJ
DATE	REVISION	BY

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

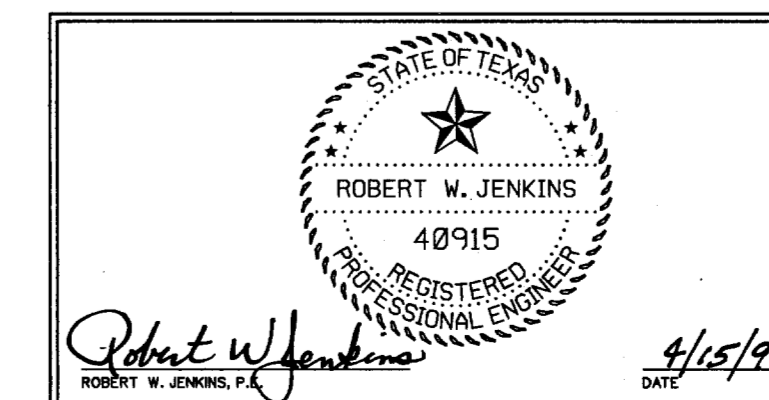
INTERSECTION LAYOUT TABLES
KELLER SPRINGS ROAD
AT QUORUM DRIVE

PROJECT No.

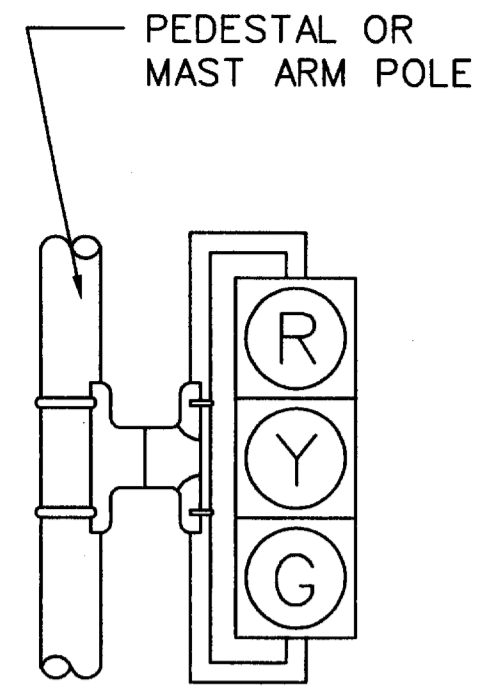
PARSONS TRANSPORTATION GROUP

2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803

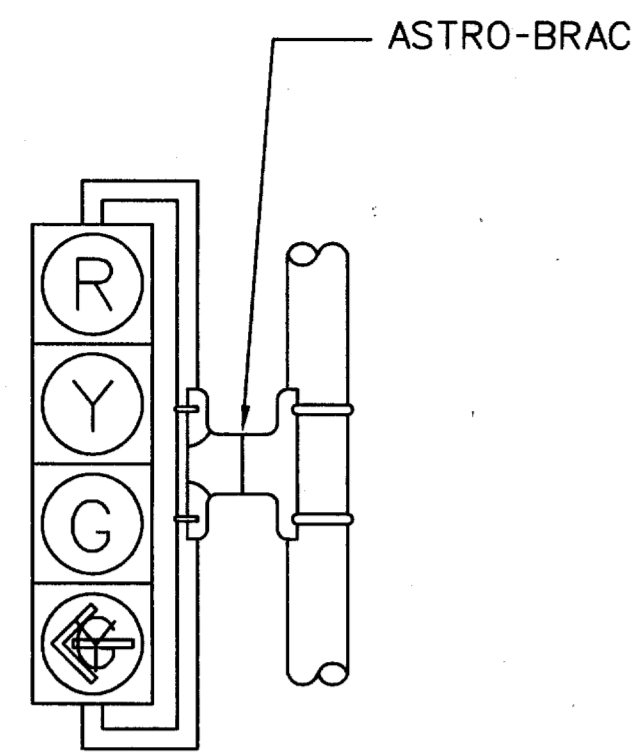
DESIGNED :	S.C.B.	DRAWN :	C. W.W.	FILE :	KEL-TAB
APPROVED :	R.W.J.	CHECKED :	A.M.	SHEET	13 OF 20



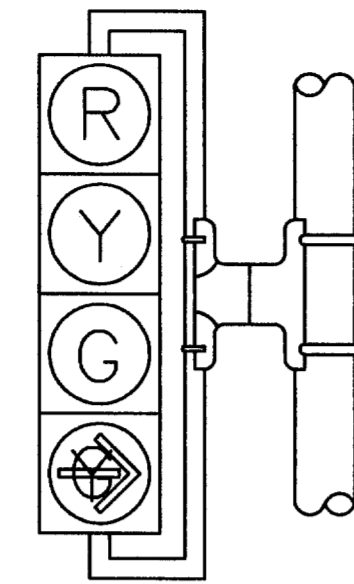
4/15/99
DATE



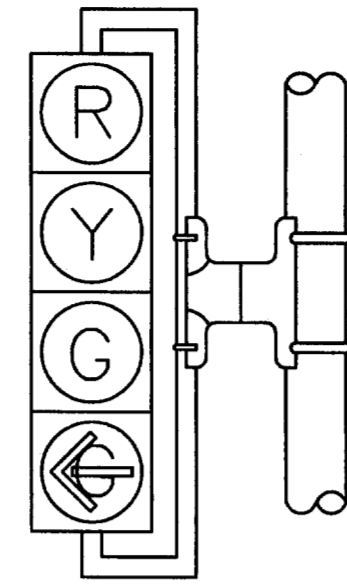
V3



V4LT(F)

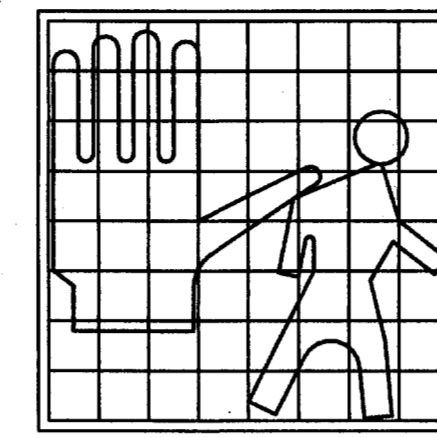


V4RT(F)

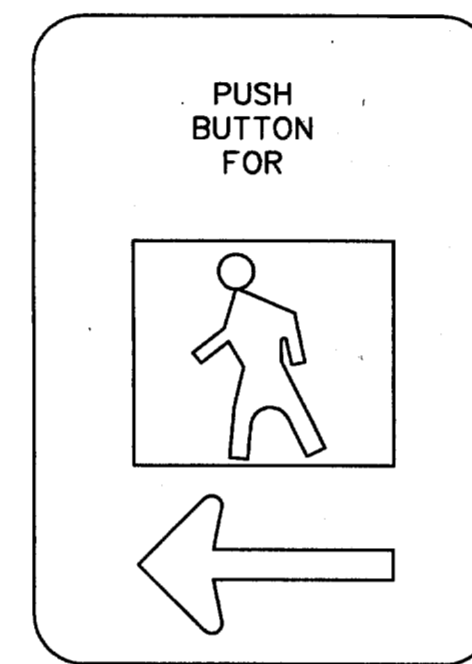


V4LT

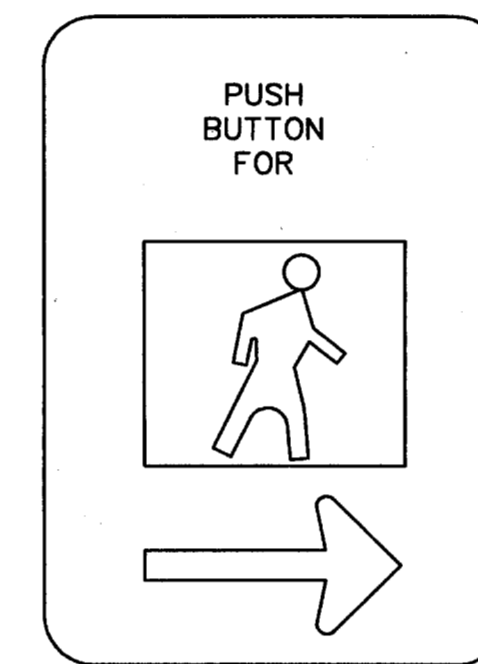
FIBEROPTIC ARROWS



PEDESTRIAN SIGNAL HEAD

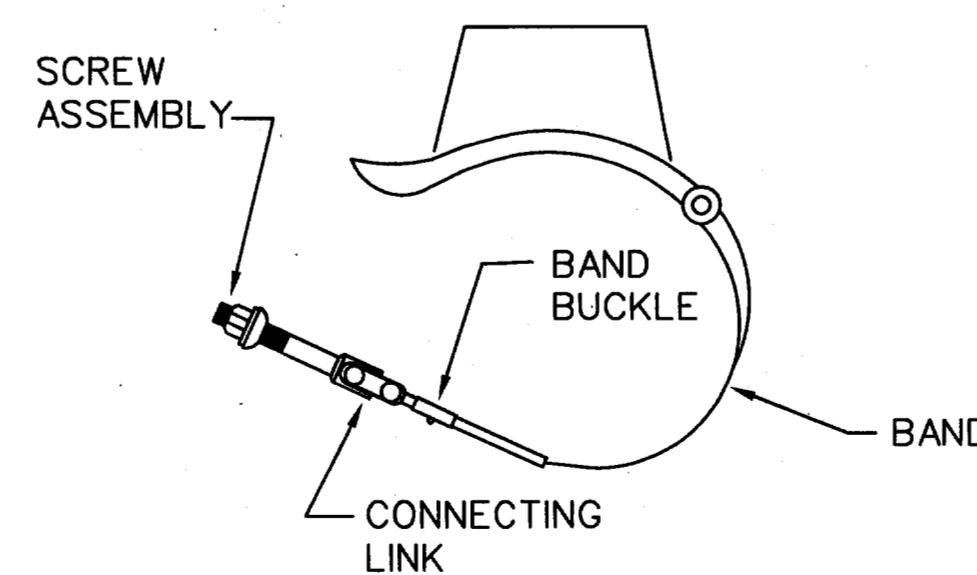


SIGN R10-4bL
9" x 12"



SIGN R10-4bR
9" x 12"

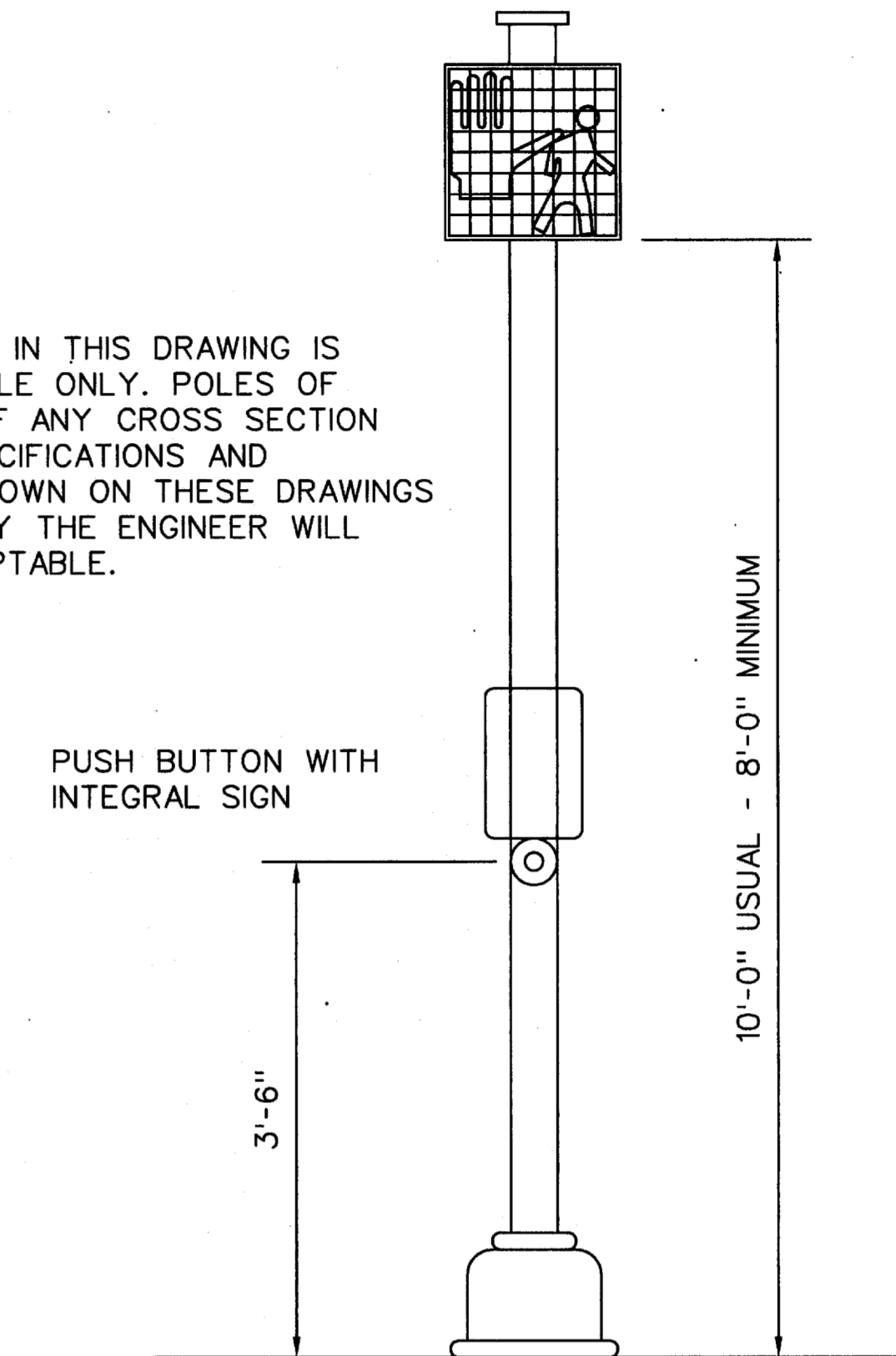
PEDESTRIAN PUSH BUTTON SIGN DETAILS



ASTRO BRAC

NOTE :

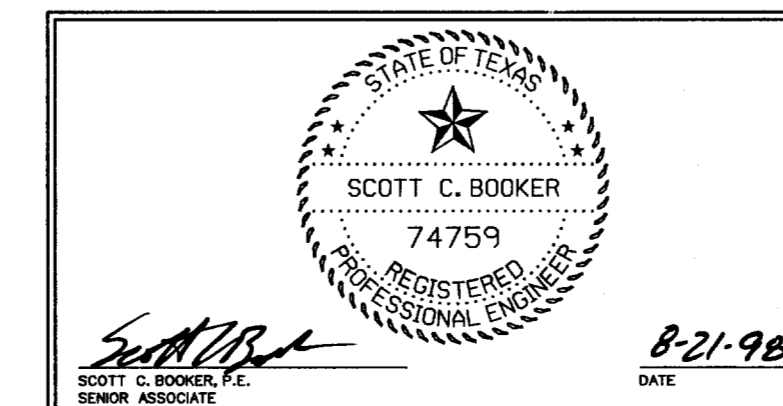
THE POLE SHOWN IN THIS DRAWING IS SHOWN AS EXAMPLE ONLY. POLES OF SIMILAR DESIGN OF ANY CROSS SECTION AND MEETING SPECIFICATIONS AND REQUIREMENTS SHOWN ON THESE DRAWINGS AND APPROVED BY THE ENGINEER WILL BE DEEMED ACCEPTABLE.



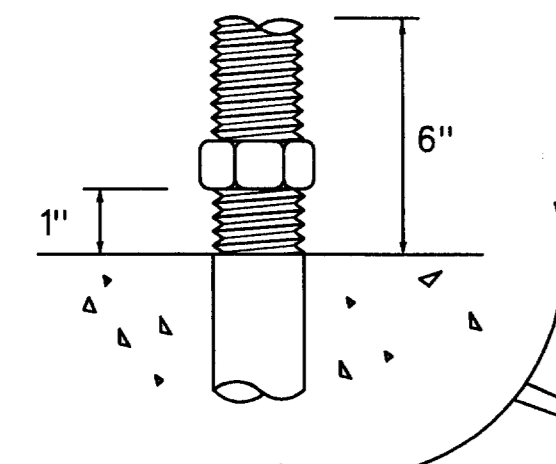
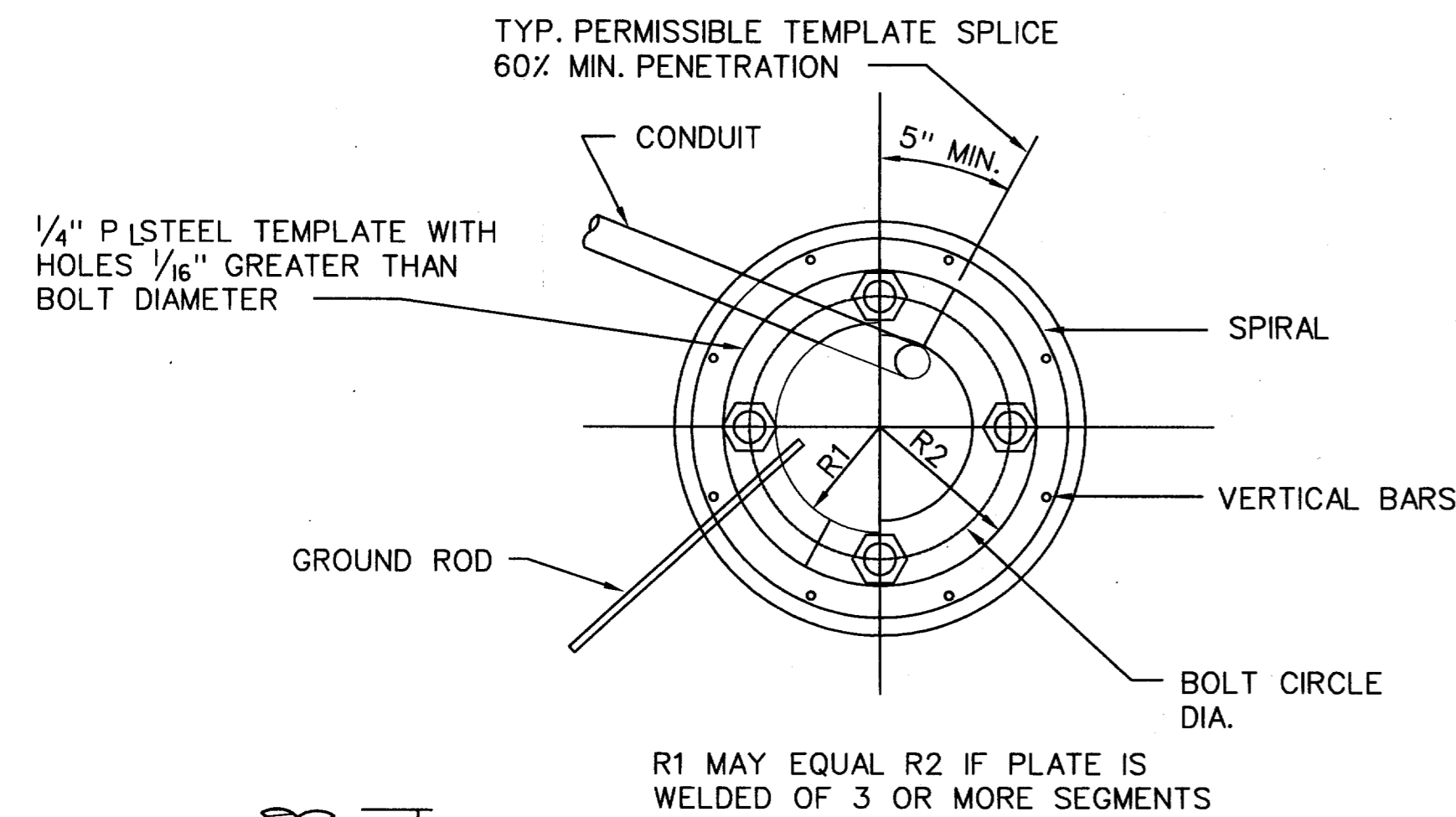
POST DETAIL

NOTES :

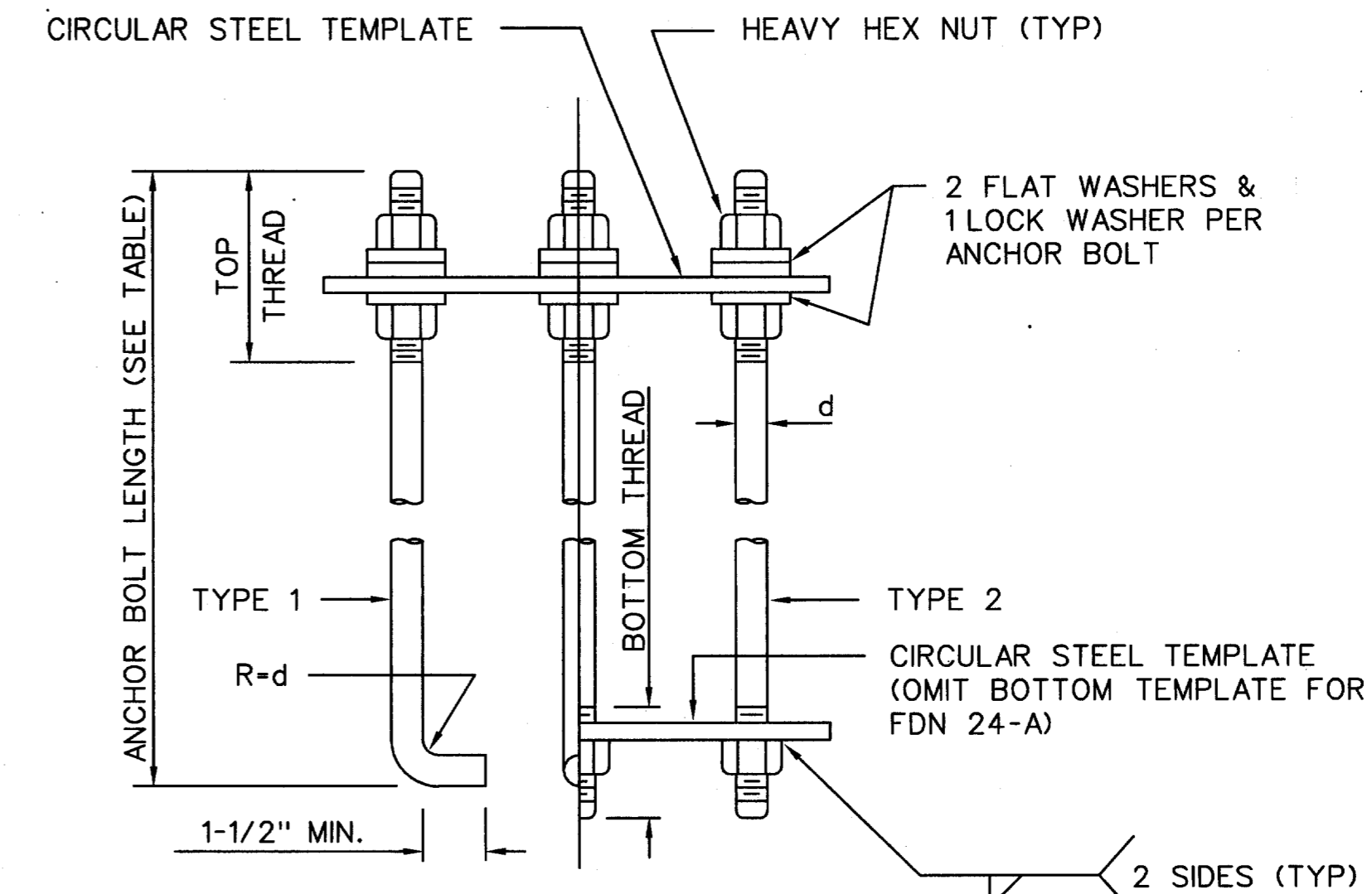
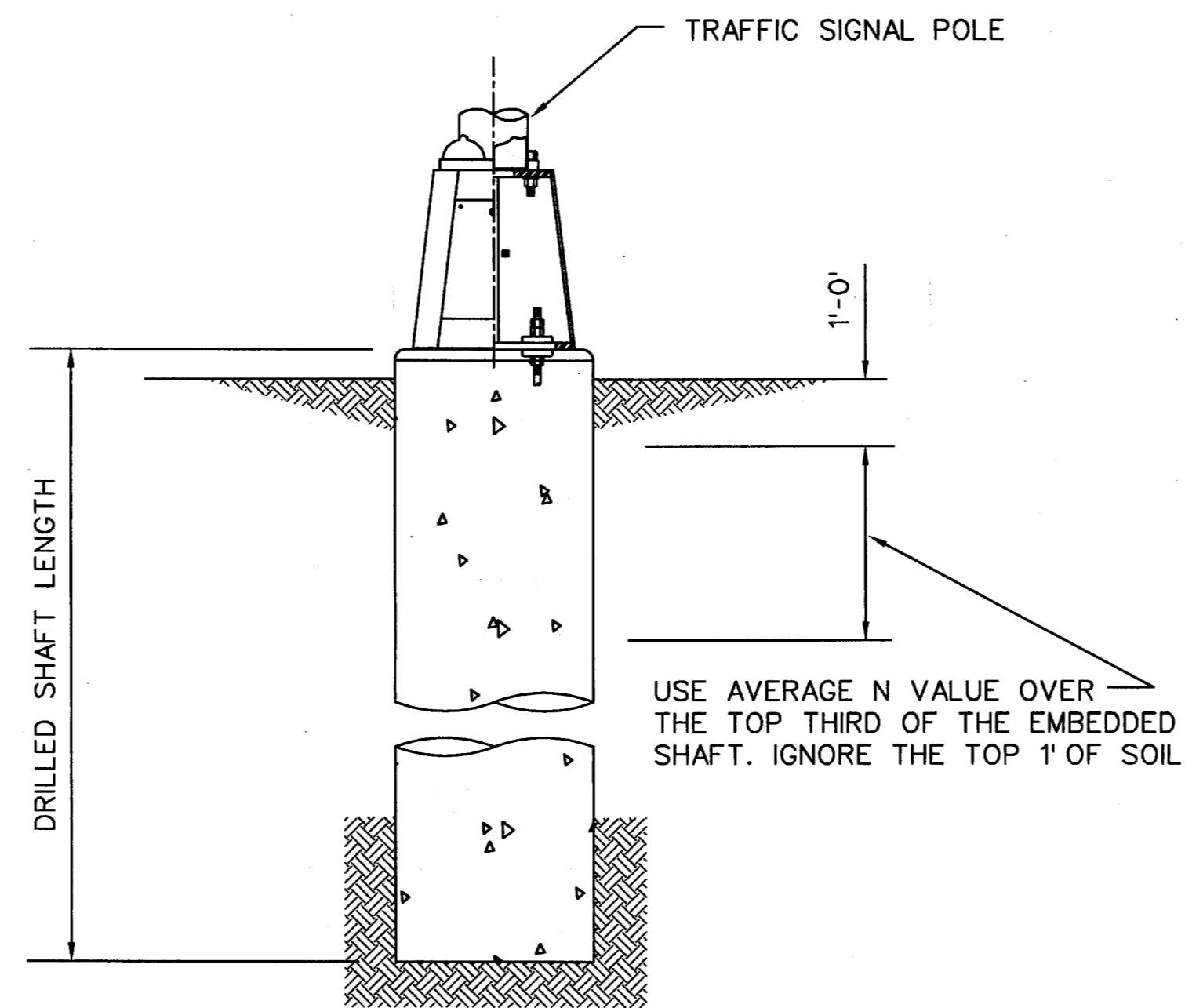
1. ALL SIGNAL HEAD LENSES SHALL BE 12" IN DIAMETER.
2. VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH "ASTRO BRACS" AND APPROPRIATE TUBING, PAINTED BLACK. ALL SIGNALS TO BE BLACK, ALL LENSES TO BE POLYCARBONATE.
3. ALL VISORS SHALL BE TUNNEL VISORS.
4. ALL POLE MOUNTED VEHICLE AND PEDESTRIAN SIGNAL HEADS SHALL BE INSTALLED ON THE AWAY-FROM-TRAFFIC SIDE OF THE PEDESTAL OR MAST ARM POLE.
5. ALL SIGNAL HEADS WILL BE PROVIDED WITH BLACK 5" POLYCARBONATE VACUUM FORMED BACKPLATES.
6. ALL WIRING FOR VEHICLE AND PEDESTRIAN SIGNALS SHALL BE TOTALLY ENCLOSED WITHIN THE SIGNAL MOUNTING HARDWARE.
7. ALL MAST ARM AND POLE MOUNTED SIGNS SHALL BE MOUNTED WITH ASTRO SIGN-BRAC OR SIGNFIX ALUMINUM CHANNEL.
8. ALL PEDESTRIAN SIGNAL HEADS AND PUSH BUTTON SIGNS SHALL DISPLAY THE SYMBOLIZED MESSAGES SHOWN ON THIS SHEET (A.D.A. APPROVED).
9. SYMBOLIZED MESSAGE HEIGHT SHALL BE 10 INCHES MINIMUM.
10. PROVIDE DURO TEST 135 WATT SAVER LAMPS IN VEHICLE SIGNALS.
11. PROVIDE DURO TEST 60 WATT SAVER LAMPS IN PEDESTRIAN SIGNALS.



DATE	REVISION	BY
TOWN OF ADDISON DALLAS COUNTY, TEXAS		
DETAIL SHEET TRAFFIC SIGNAL HEADS		
PROJECT No.		
PARSONS TRANSPORTATION GROUP		
<small>2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803</small>		
DESIGNED :	S.C.B.	DRAWN :
APPROVED :	R.W.J.	CHECKED :
		A.M.
		SHEET
		14 OF 20



TOP VIEW



HOOKED ANCHOR (TYPE 1) NUT ANCHOR (TYPE 2)

ANCHOR BOLT ASSEMBLY

INSTALLATION PROCEDURE :

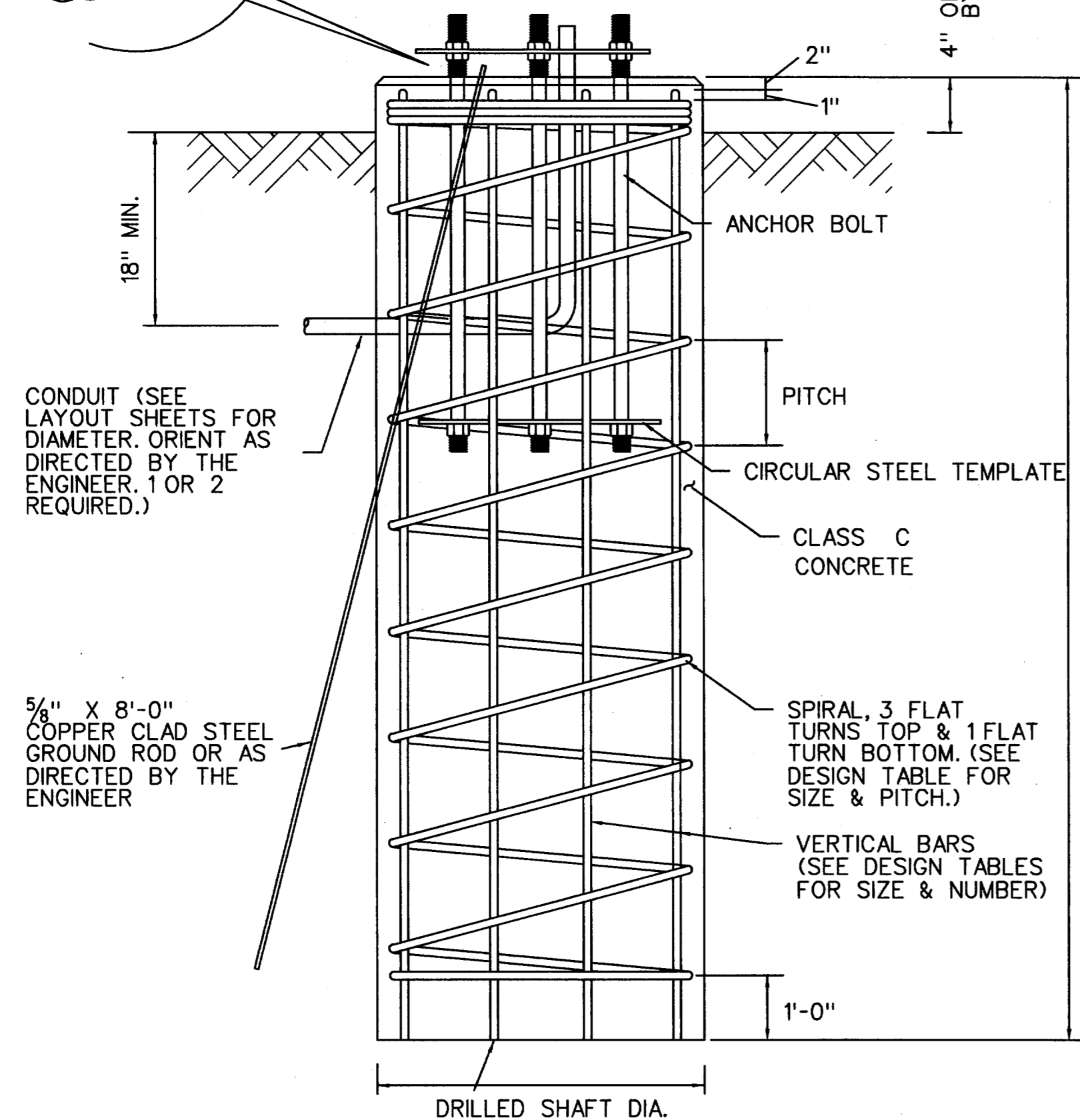
THREADS OF ANCHOR BOLTS SHALL BE COATED WITH PIPE JOINT COMPOUND PRIOR TO INSTALLATION OF UPPER NUTS WHEN ERECTING POLE. AFTER POLE IS PLUMBED AND IN PERMANENT ALIGNMENT, THE EXPOSED THREADS OF PAINTED BOLTS SHALL BE CLEANED AND AN ADDITIONAL COATING OF ZINC-RICH PAINT APPLIED TO SEAL THE BOLT THREAD-NUT JOINT.

ANCHOR BOLT & TEMPLATE SIZES						
BOLT DIAMETER	*BOLT LENGTH	TOP THREAD	BOTTOM THREAD	BOLT CIRCLE	R2	R1
3/4"	1'-6"	3"	-	12-3/4"	7-1/8"	5-5/8"
1-1/2"	3'-4"	6"	2"	17"	10"	7"
1-3/4"	3'-10"	7"	2-1/4"	19"	11-1/4"	7-3/4"
2"	4'-3"	8"	2-1/2"	21"	12-1/2"	8-1/2"

* MINIMUM DIMENSIONS GIVEN, LONGER BOLTS ARE ACCEPTABLE

FOUNDATION DESIGN TABLE

FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		DRILLED SHAFT LENGTH-ft (3), (4), (5)			ANCHOR BOLT DESIGN (1)				FOUNDATION DESIGN LOAD (2)	
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft			ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips
				10	15	40						
24-A	24"	4-#5	*2 at 12"	5.7	5.3	4.5	3/4"	36	12 3/4"	1	10	1
30-A	30"	8-#9	*3 at 6"	11.3	10.3	8.0	1 1/2"	55	17"	2	87	3
36-A	36"	10-#9	*3 at 6"	13.2	12.0	9.4	1 3/4"	55	19"	2	131	5
36-B	36"	12-#9	*3 at 6"	15.2	13.6	10.4	2 "	55	21"	2	190	7

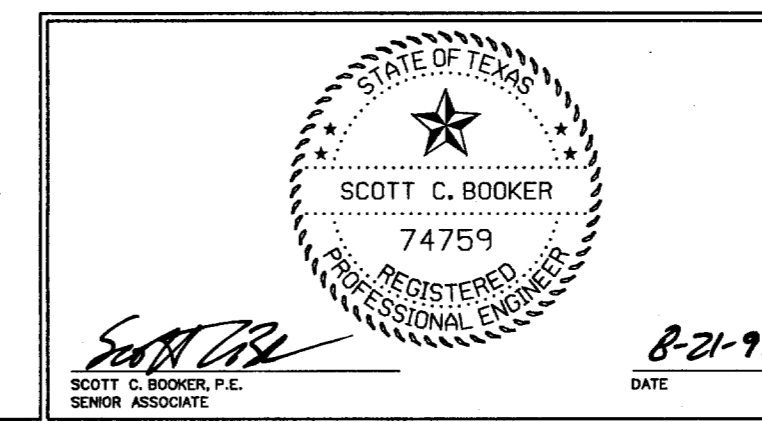


ELEVATION

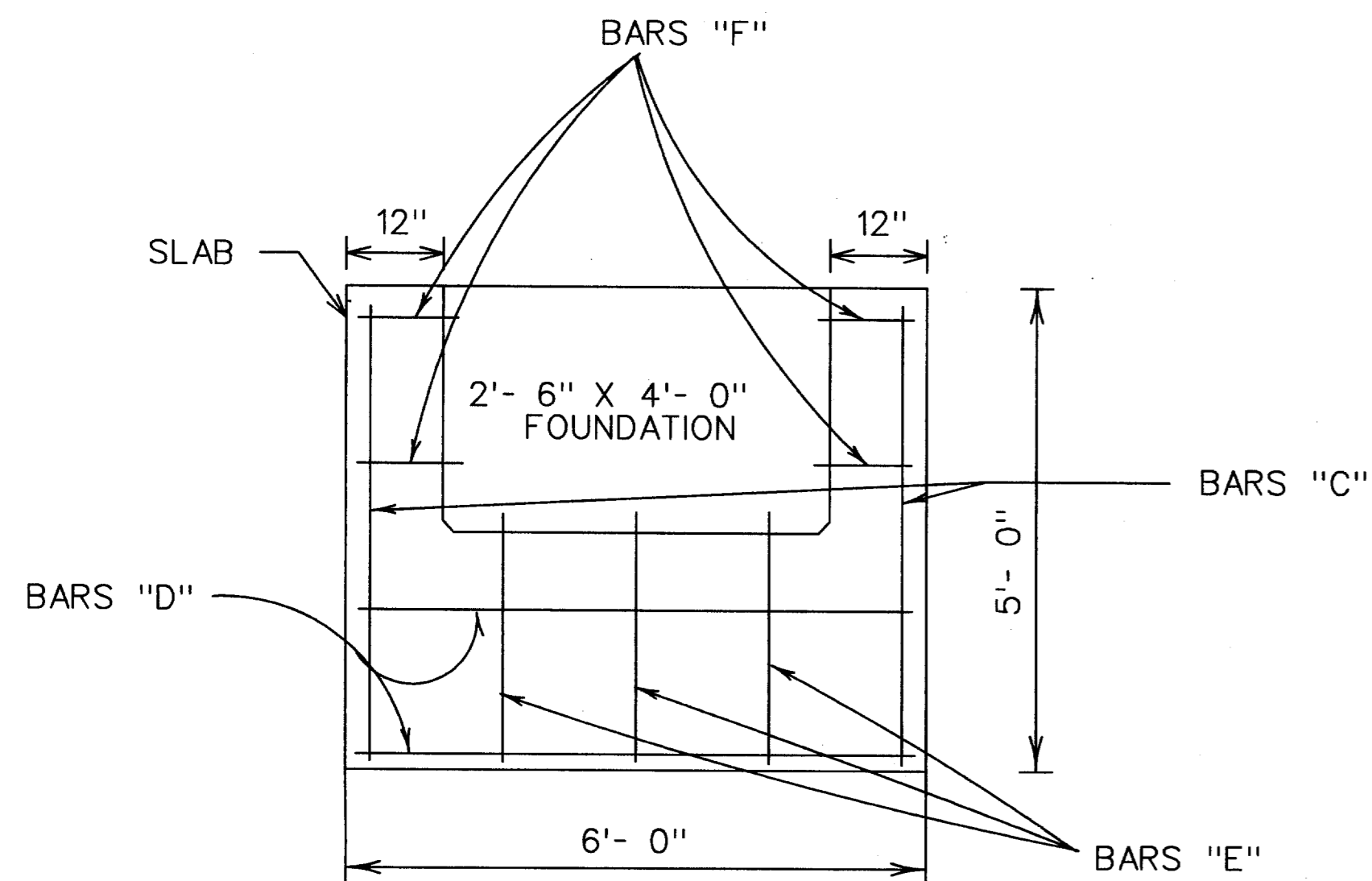
FOUNDATION DETAILS

NOTES :

- (1) ANCHOR BOLT DESIGN DEVELOPS THE FOUNDATION CAPACITY GIVEN UNDER FOUNDATION DESIGN LOADS.
- (2) FOUNDATION DESIGN LOADS ARE THE ALLOWABLE MOMENTS AND SHEARS AT THE BASE OF THE STRUCTURE.
- (3) FIELD PENETROMETER READINGS AT A DEPTH OF APPROXIMATELY 3 TO 5 FEET MAY BE USED TO ADJUST SHAFT LENGTHS.
- (4) IF ROCK IS ENCOUNTERED, THE DRILL SHAFT SHALL EXTEND A MINIMUM OF TWO DIAMETERS INTO SOLID ROCK.
- (5) DECIMAL LENGTHS IN DESIGN TABLE ARE TO ALLOW INTERPOLATION FOR OTHER PENETROMETER VALUES.

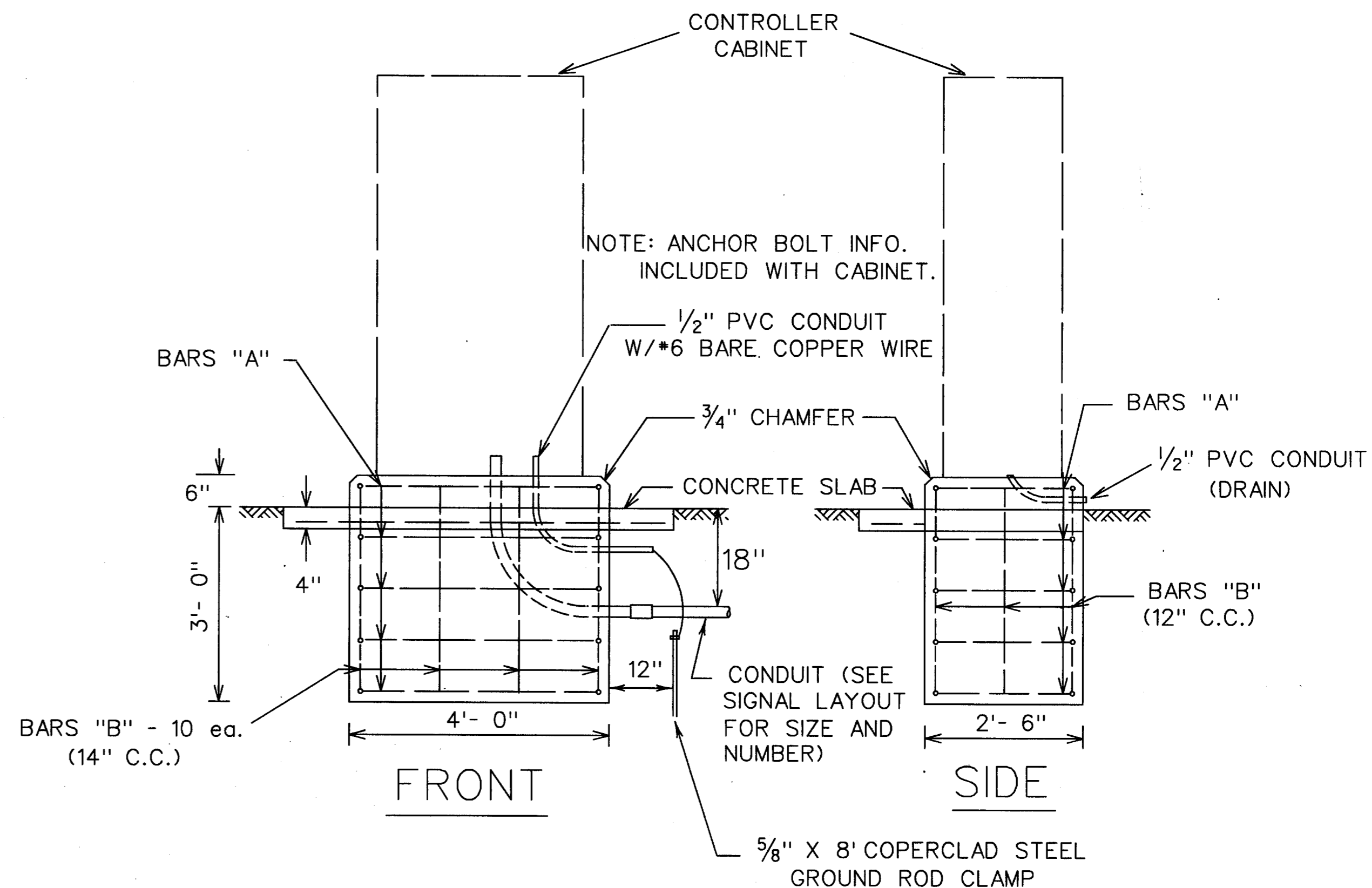
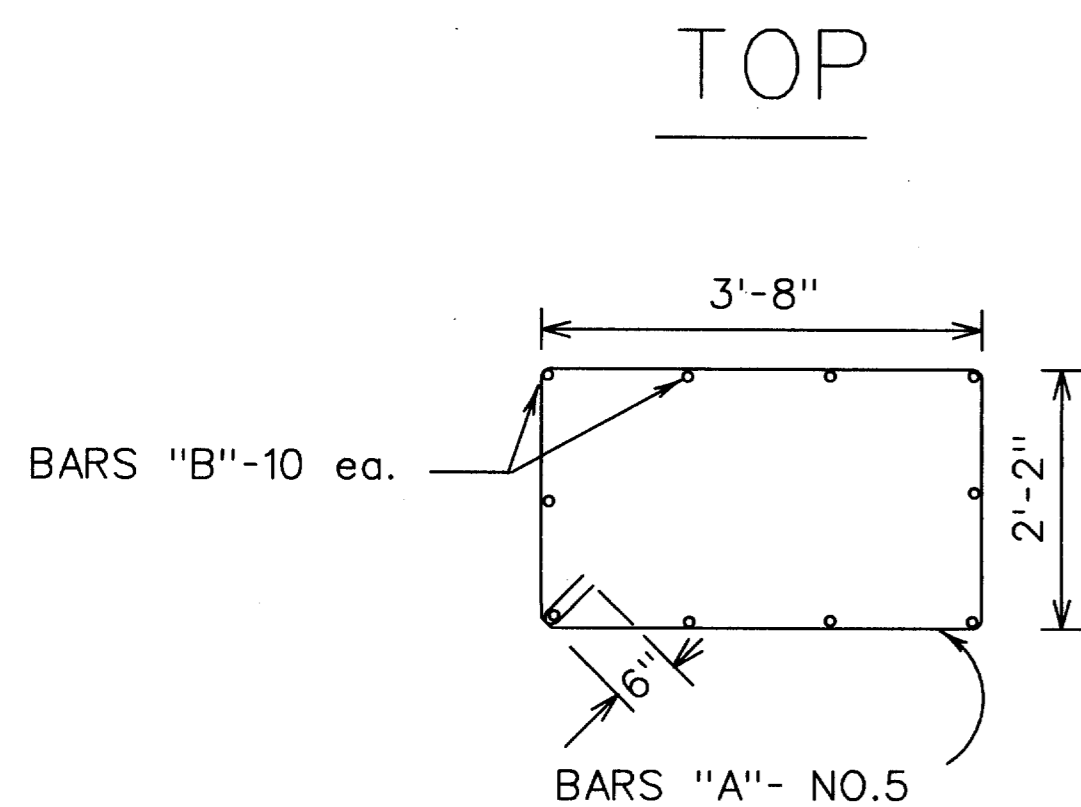


DATE	REVISION	BY
TOWN OF ADDISON DALLAS COUNTY, TEXAS		
DETAIL SHEET TRAFFIC SIGNAL POLE FOUNDATIONS		
PROJECT No.		
PARSONS TRANSPORTATION GROUP 2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803		
DESIGNED :	S.C.B.	DRAWN : C.W.W. FILE : DET-44
APPROVED :	R.W.J.	CHECKED : A.M. SHEET 15 OF 20

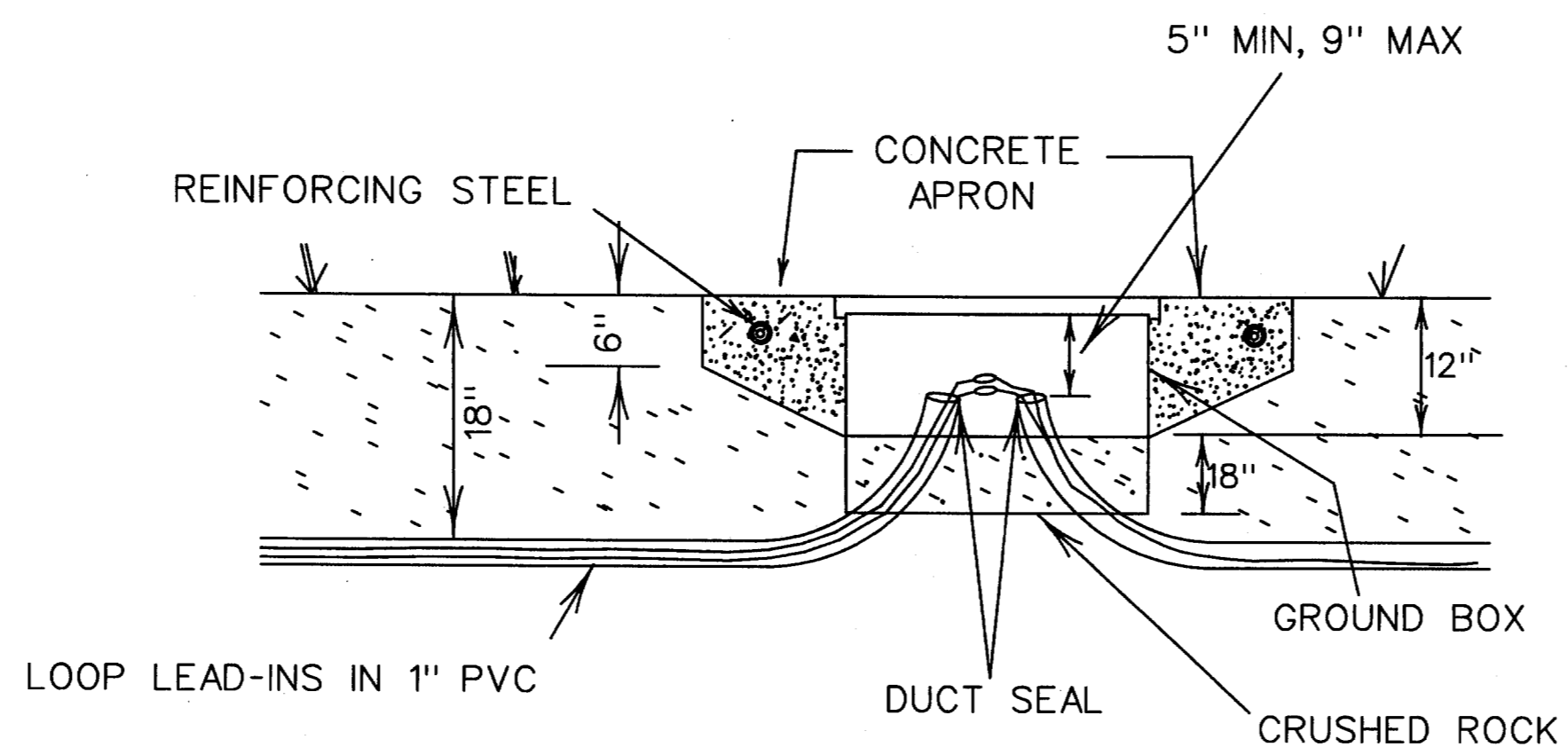
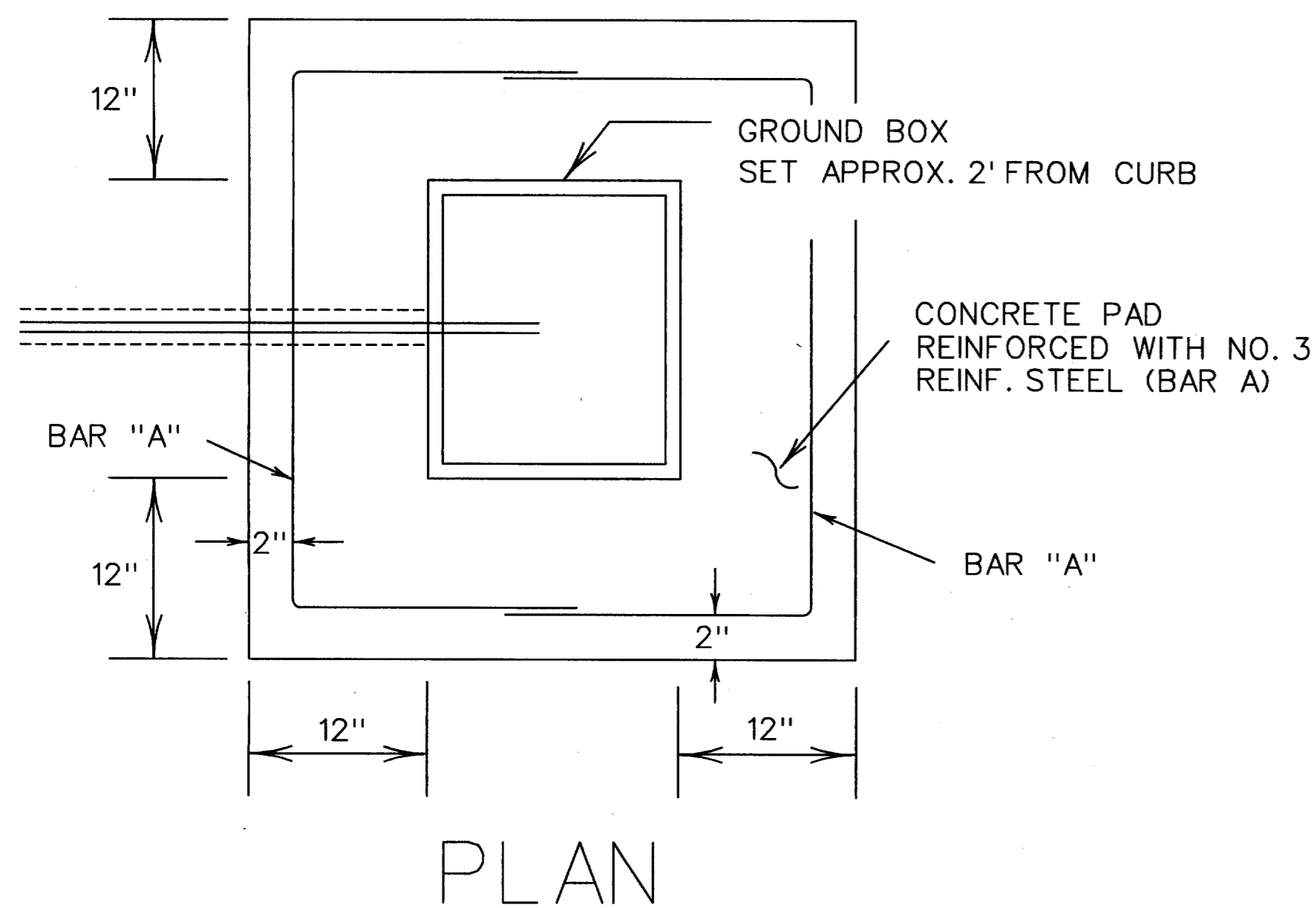


BAR	NO. BARS	SIZE	LENGTH	SPACING
A	6	5	12'-8"	9.5" C.C.
B	10	5	3'-2"	VAR.
C	2	3	4'-8"	16.5" C.C.
D	2	3	5'-8"	18" C.C.
E	3	3	2'-8"	16.5" C.C.
F	4	3	1'-2"	18" C.C.

PROVIDE 2" MIN. COVER FOR TOP AND SIDES

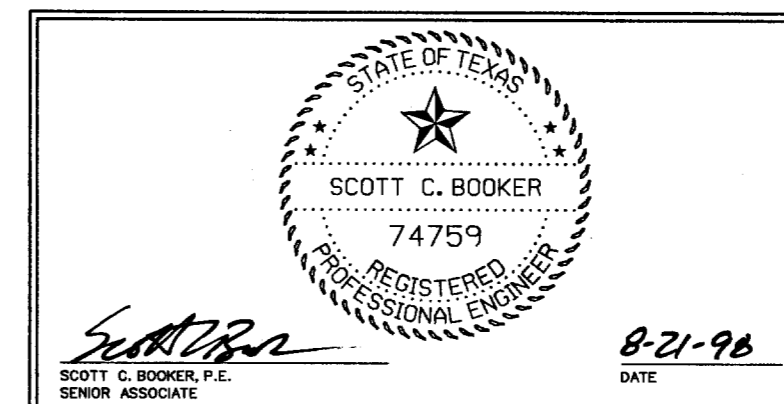


CONTROLLER FOUNDATION DETAILS

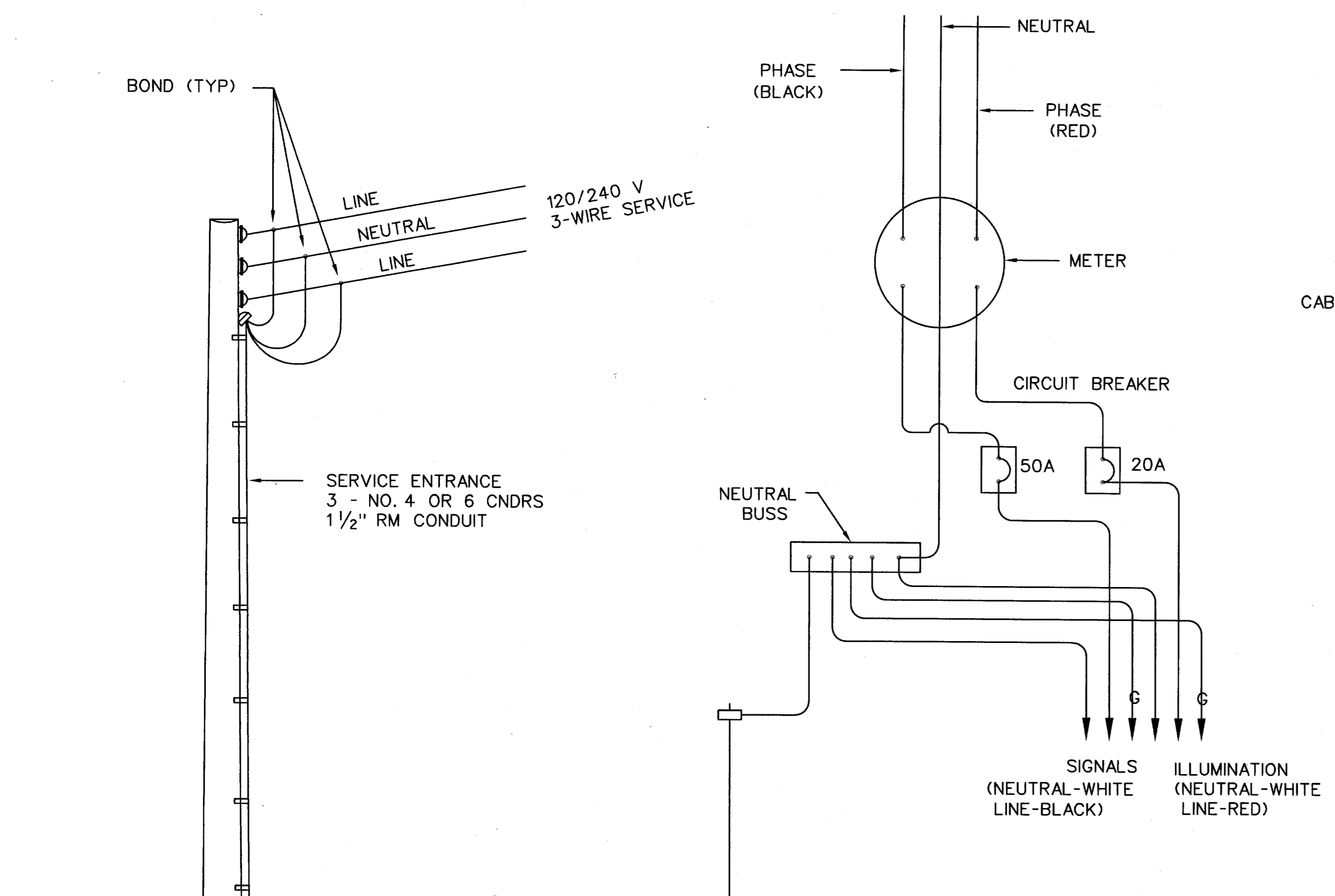


ELEVATION

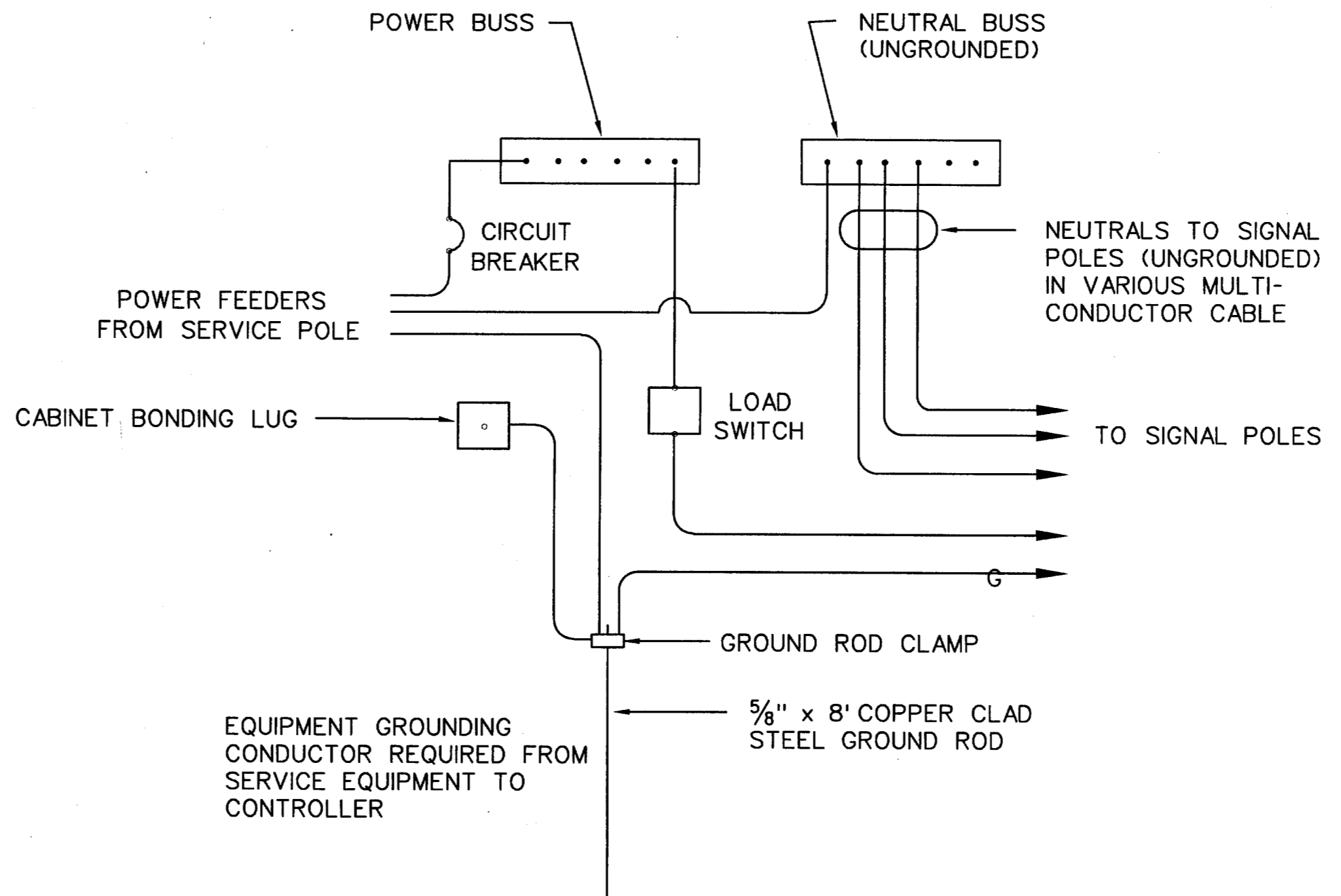
GROUND BOX INSTALLATION DETAILS



DATE	REVISION	BY
TOWN OF ADDISON DALLAS COUNTY, TEXAS		
DETAIL SHEET CONTROLLER FOUNDATION AND GROUND BOX INSTALLATION		
PROJECT No.		
PARSONS TRANSPORTATION GROUP <small>2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803</small>		
DESIGNED :	S.C.B.	DRAWN : C. W.W.
APPROVED :	R.W.J.	CHECKED : A.M.
FILE :	DET-55	SHEET 16 OF 20



SERVICE ASSEMBLY SCHEMATIC



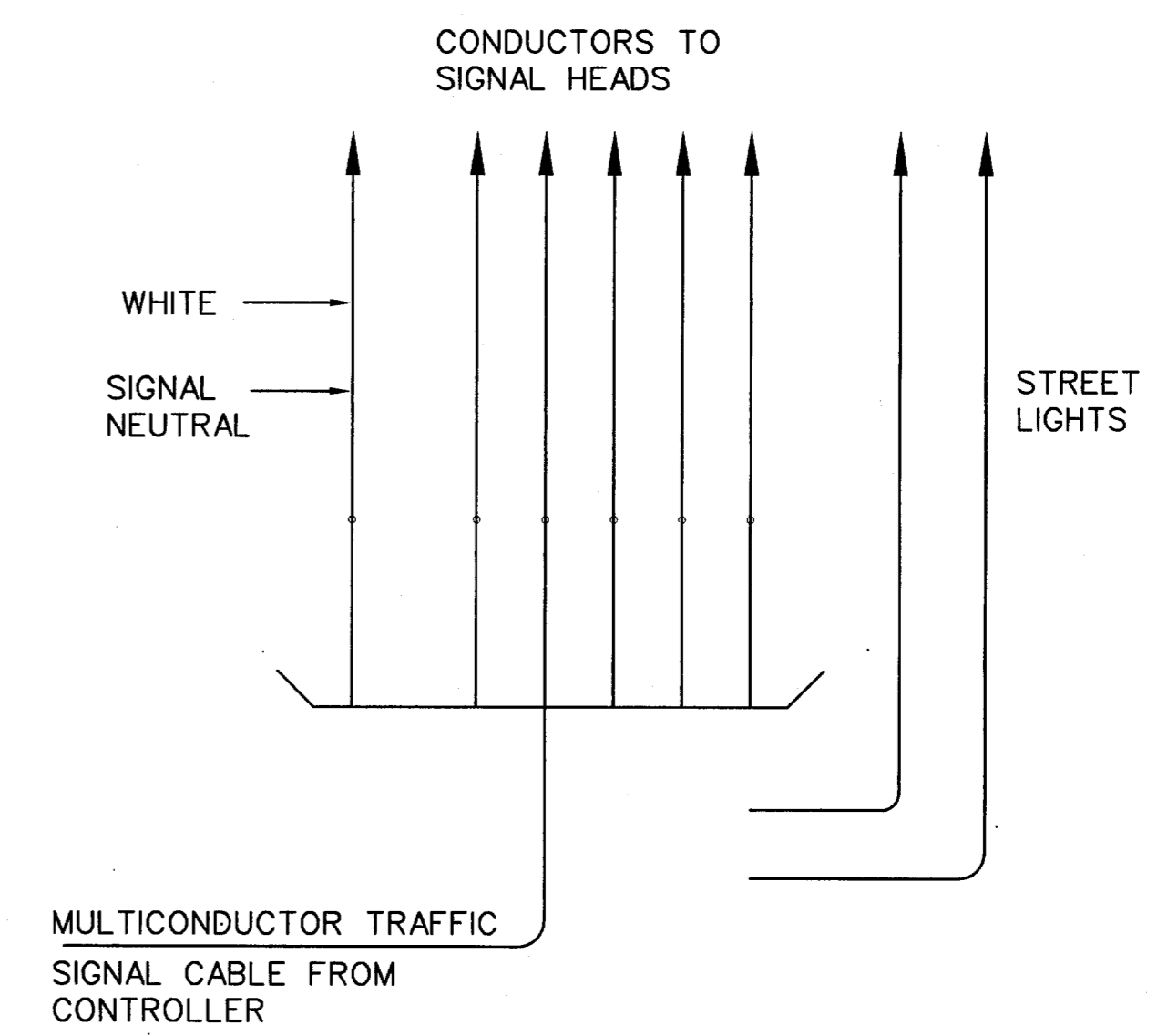
CONNECTIONS AT SIGNAL CONTROLLERS

NOTES:

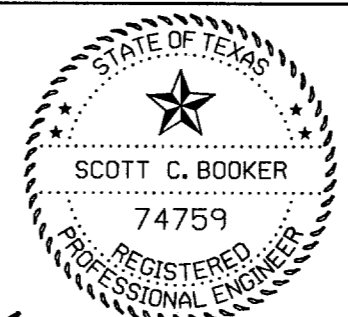
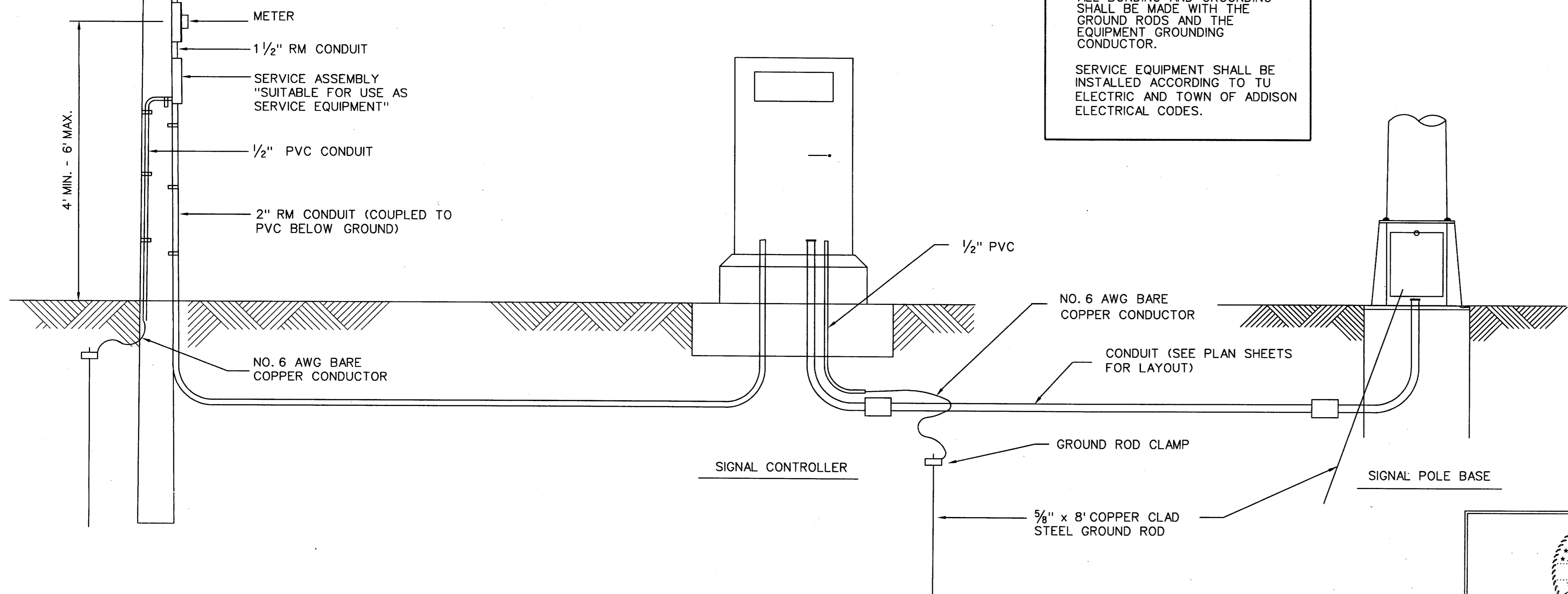
THE TRAFFIC SIGNAL SYSTEM NEUTRAL CONDUCTOR SHALL BE GROUNDED AT THE SERVICE POLE ONLY.

ALL BONDING AND GROUNDING SHALL BE MADE WITH THE GROUND RODS AND THE EQUIPMENT GROUNDING CONDUCTOR.

SERVICE EQUIPMENT SHALL BE INSTALLED ACCORDING TO TU ELECTRIC AND TOWN OF ADDISON ELECTRICAL CODES.

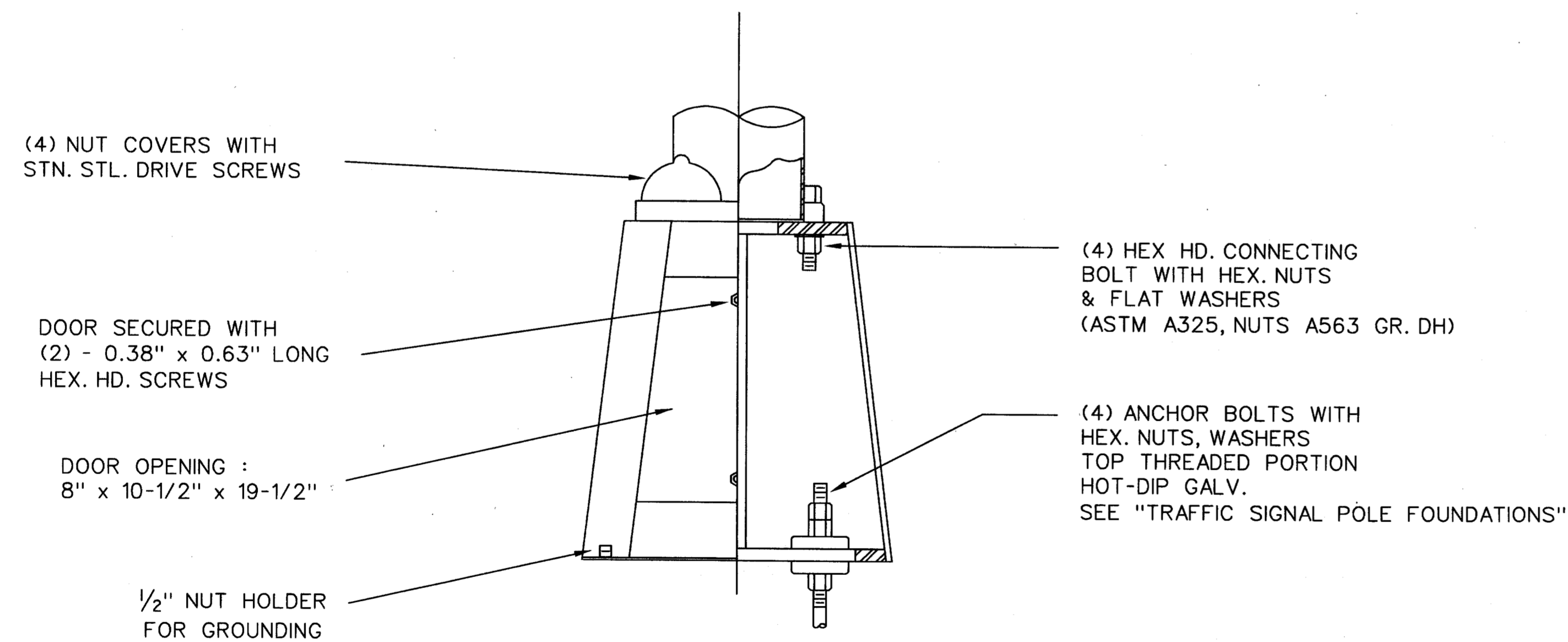
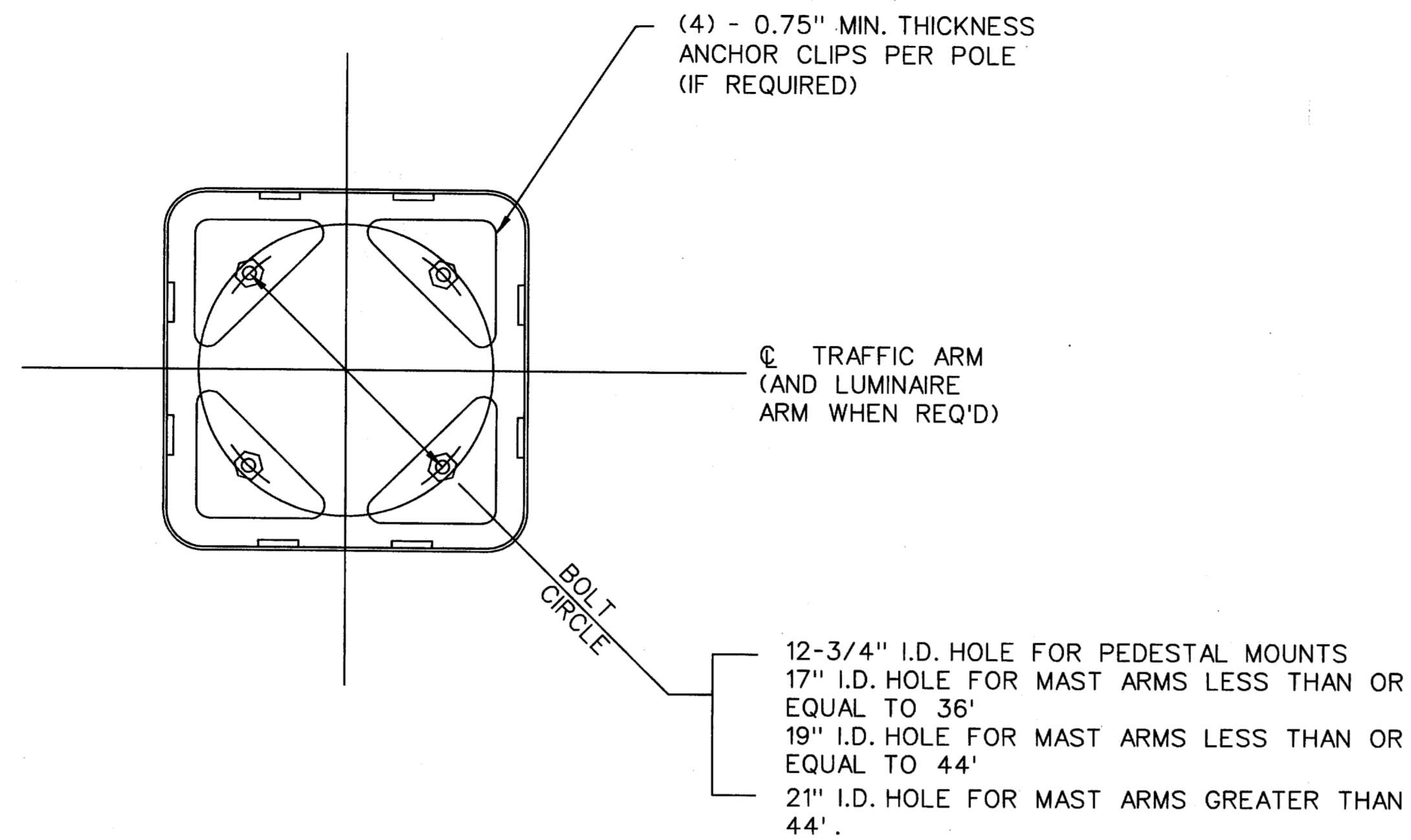


CONNECTIONS AT POLE BASE



8-21-98
DATE

DATE	REVISION	BY
TOWN OF ADDISON DALLAS COUNTY, TEXAS		
DETAIL SHEET SERVICE POLE AND GROUNDING		
PROJECT No.		
PARSONS TRANSPORTATION GROUP 2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803		
DESIGNED :	S.C.B.	FILE : DET-33
APPROVED :	R.W.J.	CHECKED : A.M.
		SHEET 17 OF 20



TRANSFORMER BASE MOUNTING DETAILS

NOTES:

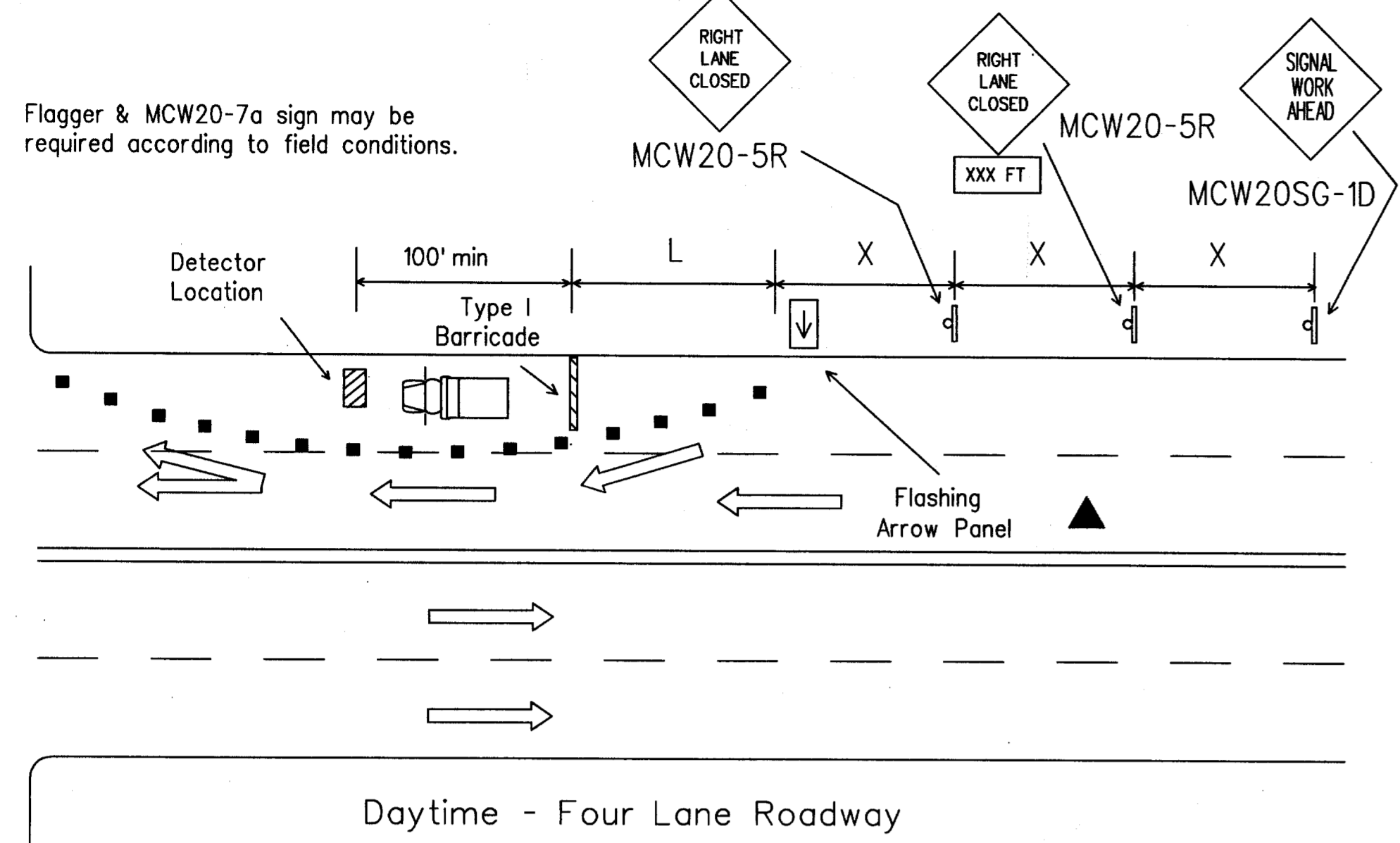
ALL ELECTRICAL CONNECTIONS ON FIELD WIRING IN POLE BASES SHALL BE MADE TO TERMINAL BARRIER STRIPS WITH SPADE LUGS.

DATE	REVISION	BY
TOWN OF ADDISON DALLAS COUNTY, TEXAS		
DETAIL SHEET		
TRANSFORMER BASE		
PROJECT No.		
PARSONS TRANSPORTATION GROUP <small>2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803</small>		
DESIGNED :	S.C.B.	FILE : DET-22
APPROVED :	R.W.J.	CHECKED : A.M. SHEET 18 OF 20

SCOTT C. BOOKER
74759
REGISTERED PROFESSIONAL ENGINEER
STATE OF TEXAS

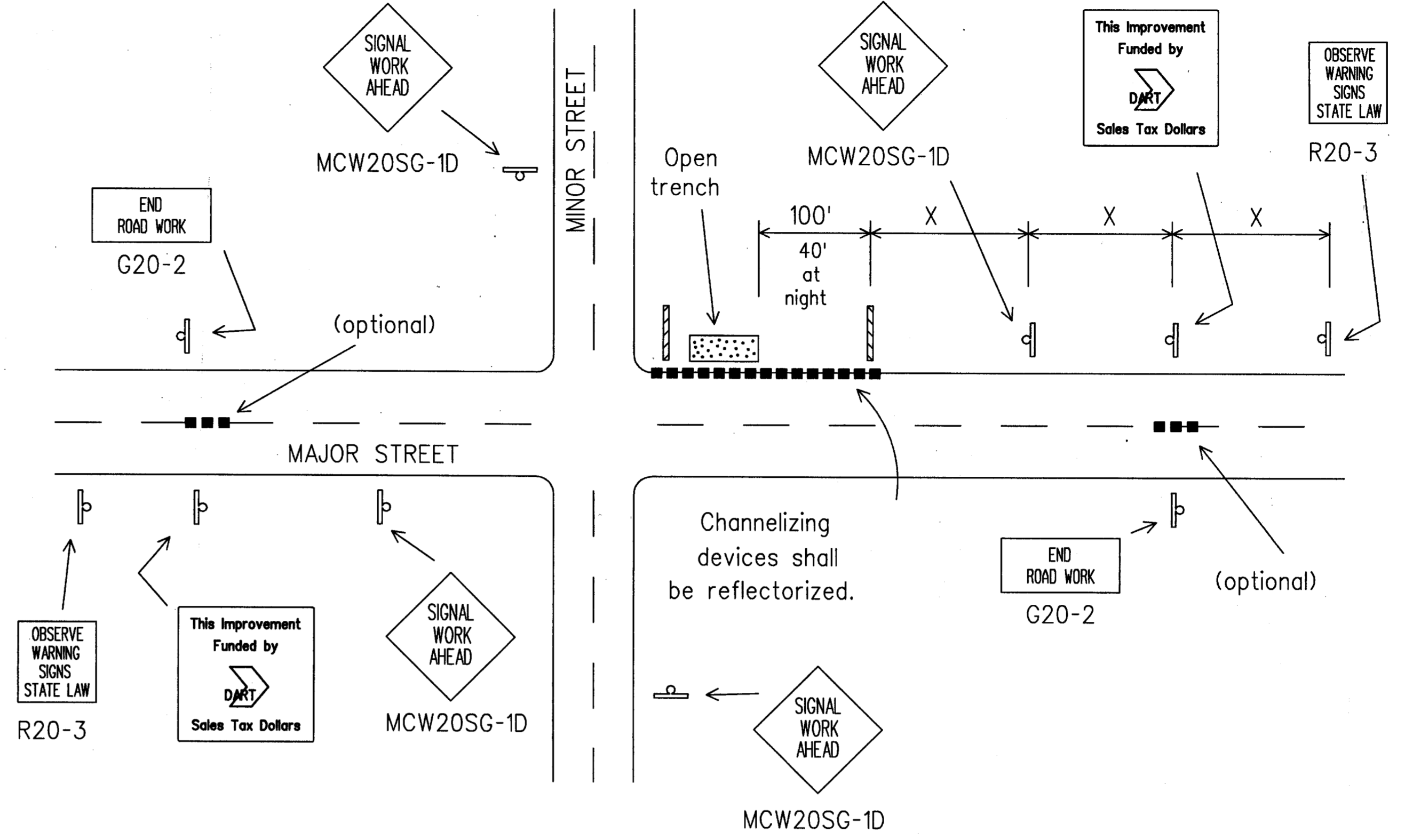
Scott C. Booker
SCOTT C. BOOKER, P.E.
SENIOR ASSOCIATE

8-21-98
DATE

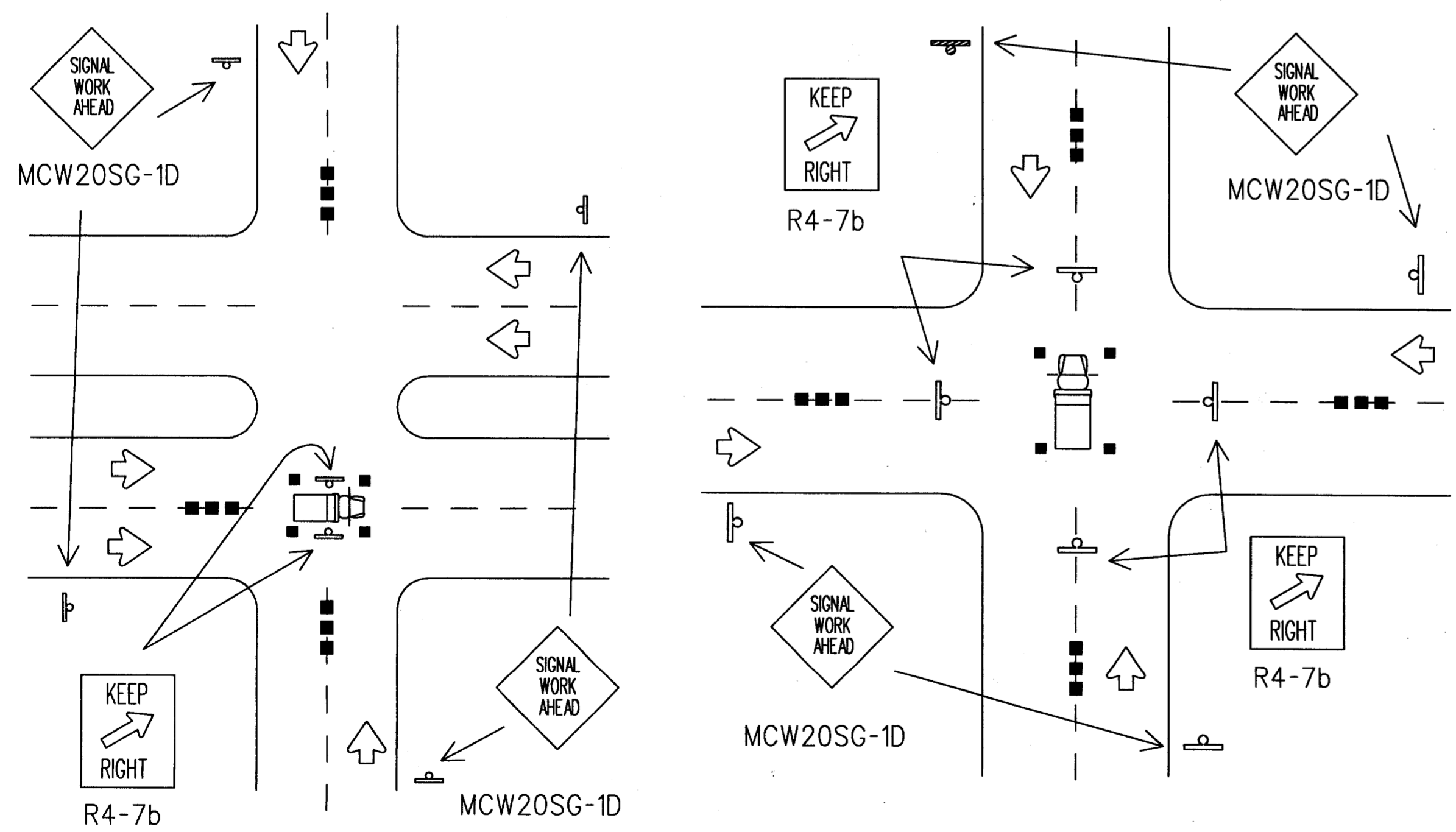


TYPICAL DETECTOR INSTALLATION

Nighttime - 1. Channelizing Devices shall be reflectorized.
2. Barricades shall have Flashing Warning Lights.



TYPICAL ADVANCE SIGNING



TYPICAL HANGING SIGNAL INSTALLATIONS

Advance warning channelizing devices are optional.

Posted Speed	Formula	Minimum Desirable Taper Lengths			Suggested Maximum Spacing of Device		Minimum Sign Spacing X Distance
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent	
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'-75'	120'
35		205'	225'	245'	35'	70'-90'	160'
40	$L = WS$	265'	295'	320'	40'	80'-100'	240'
45		450'	495'	540'	45'	90'-110'	320'

L=Length of Taper (FT.) W=Width of Offset (FT.) S=Posted Speed (MPH)

- Legend**
- Heavy Work Vehicle
 - Type I Barricade
 - Channelizing Devices
 - Flashing Arrow Panel

▲ The arrow panel may be omitted when stated elsewhere in the plans.

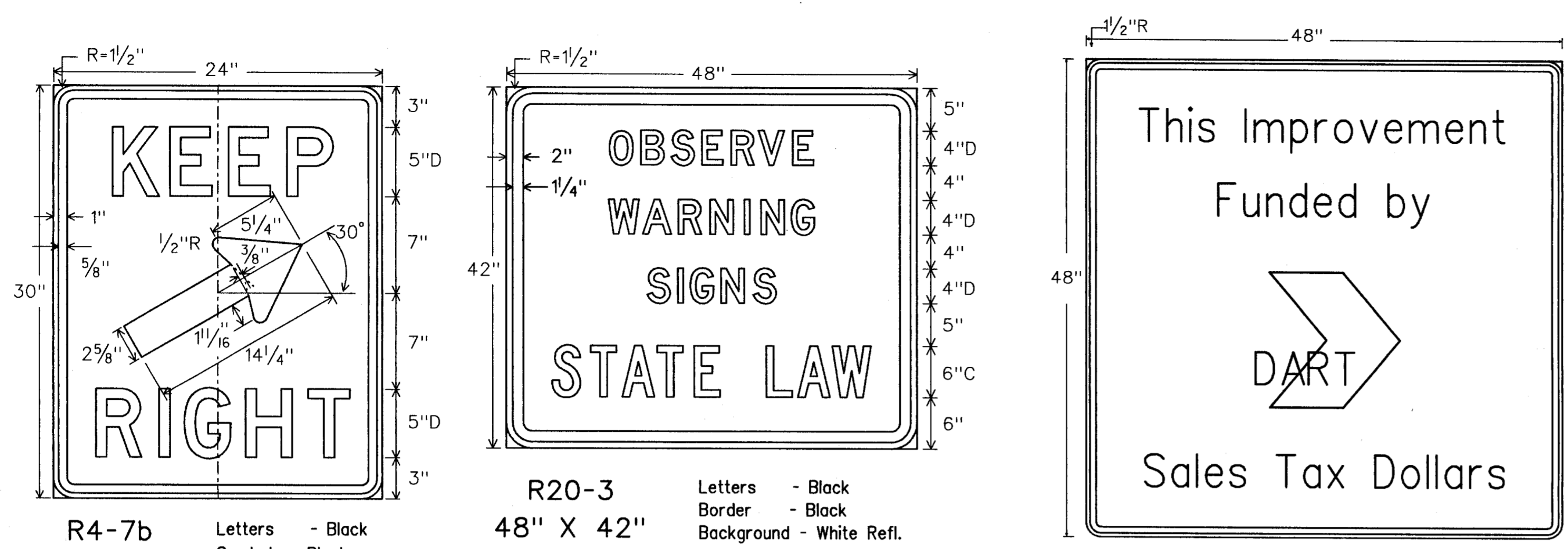
Typical channelizing device is the 28" cone. Plastic drums may be used if approved by the Owner. Metal drums shall NOT be used as a channelizing device or sign support.

Advance signs and barricades shall be in place when signal construction operations are in progress. The contractor may remove advance signs and barricades when no construction operations are underway if permitted elsewhere in the plans. Obstructions or hazards at the work area shall be clearly marked and delineated at all times.

All holes, trenches or other hazardous areas shall be adequately protected by barricades, lights or other protective devices. Trenches shall be covered or surrounded with orange plastic construction fence as directed by the Engineer.

Flagger and MCW20-7a sign may be required according to field conditions. Vehicles parked in roadway shall be equipped with two strobes. High level flags at corners of vehicle may also be used. Work operations that require work vehicle in traveled way 20 minutes or less may use cones, high level flags and strobes as advance warning devices. Cones should only be placed around vehicle. Flaggers may be used on high speed rural intersections.

DATE	REVISION	BY
TOWN OF ADDISION DALLAS COUNTY, TEXAS		
DETAIL SHEET TRAFFIC CONTROL PLAN SHEET 1 OF 2 PROJECT No.		
PARSONS TRANSPORTATION GROUP 2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803		
DESIGNED :	S.C.B.	DRAWN : C.W.W.
APPROVED :	R.W.J.	CHECKED : A.M.
FILE :	WZ-1	SHEET 19 OF 20



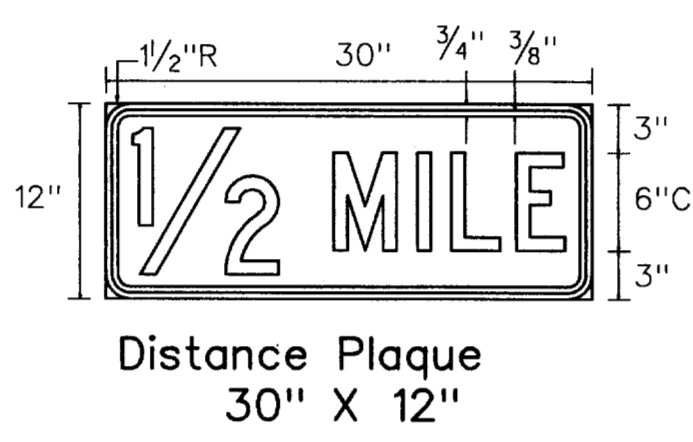
R4-7b
24" X 30"
Letters - Black
Symbol - Black
Border - Black
Background - White Refl.

R20-3
48" X 42"
Letters - Black
Border - Black
Background - White Refl.

G20-2a
48" X 24"
Letters - Black
Border - Black
Background - Orange Refl.

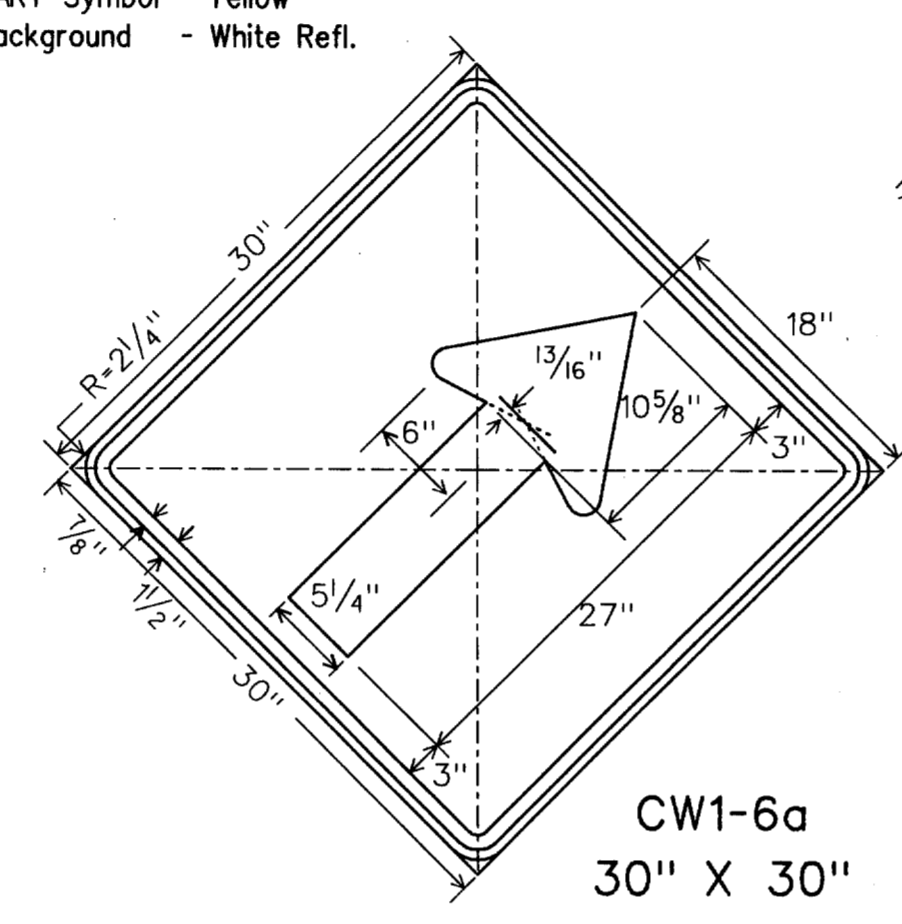


R4-8b

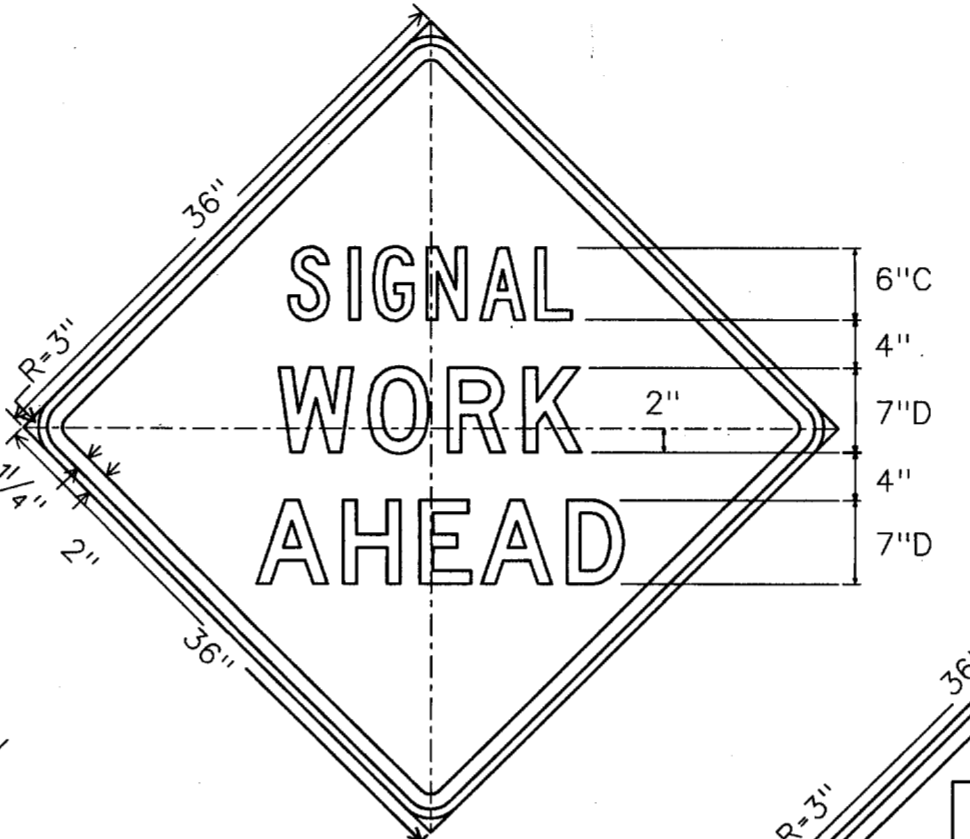


Distance Plaque
30" X 12"

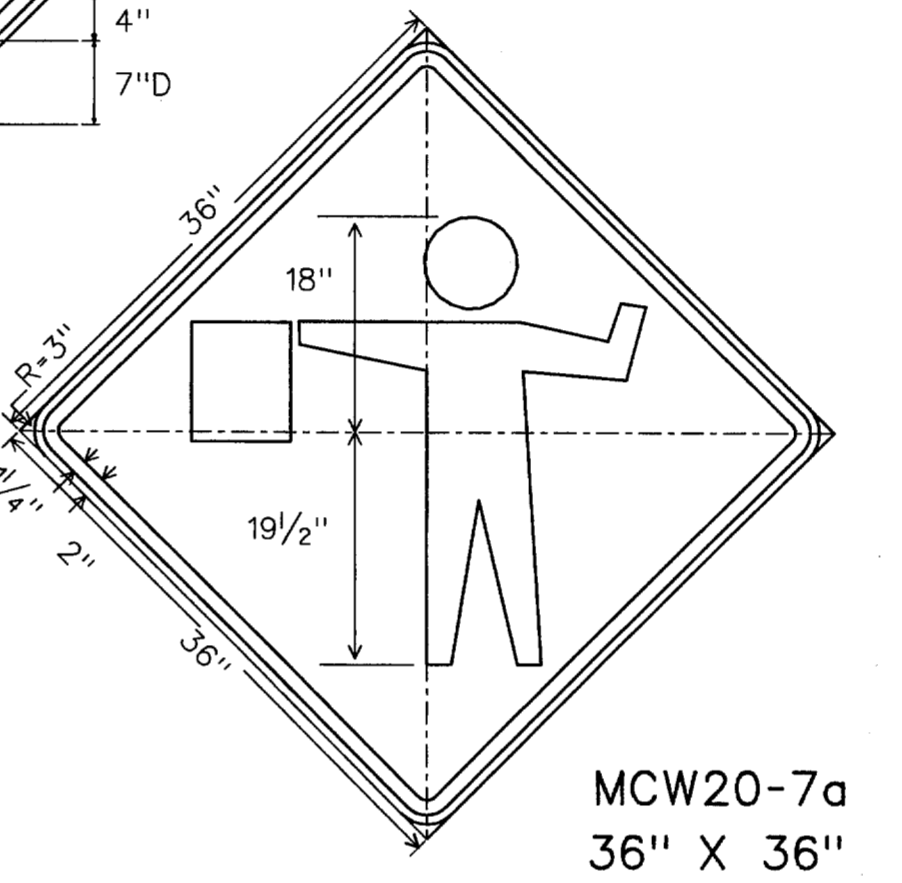
Alternate legends
1 MILE 6"
1500 FT 6"
1000 FT 6"
500 FT 6"



CW1-6a
30" X 30"
Legend - Black
Border - Black
Background - Orange Refl.



MCW20SG-1D
36" X 36"
Letters - Black
Border - Black
Background - Orange Refl.



MCW20-7a
36" X 36"
Legend - Black
Border - Black
Background - Orange Refl.

GENERAL

All sign usage and erection shall be in strict accordance with the "Texas Manual on Uniform Traffic Control Devices for Streets and Highways" (TMUTCD). The Contractor shall maintain each sign as directed by the Owner. The Contractor shall use the sign designs shown in the "Standard Highway Sign Designs for Texas" (SHSD). All work zone signs provided for in the TMUTCD but not detailed in the plans may be used when directed by the Owner.

WARNING LIGHTS

When required by the Owner the Contractor shall furnish a copy of the warning light certification. The certification will be by the manufacturer, stating the lights meet the requirements of the latest ITE Purchase Specification for Flashing and Steady-Burn Warning Lights.

REFLECTIVE SHEETING

Type A, B or C sheeting may be used for all, day only, applications. Type A sheeting should be used for all, white background, regulatory signs. Type C sheeting shall be used for all other applications. The above applications of sheeting grades to different type signs will apply unless otherwise specified in the plans. TYPE A - Engineer Grade TYPE B - Super Engineer Grade TYPE C - High Specific Intensity

SUPPORTS AND MOUNTING HEIGHT

Regardless of the type of support used, or duration of work, regulatory signs should not be erected at heights less than 7 feet above the pavement surface. Wood sign post supports shall be painted white. Signs may be erected on portable or fixed supports for use on construction projects to warn or guide traffic through and/or around the actual construction area. PORTABLE - Signs erected on portable supports for use on construction projects normally mean signs which are used during the daytime to warn or guide traffic through and/or around the actual construction area, but at the end of the workday such signs are removed. Portable supports shall be as shown on this sheet. Signs with portable supports may be used for short term, short duration and mobile operations. The bottom of the sign shall be a minimum of one (1) foot above the pavement surface. FIXED - Signs erected on fixed supports for use on construction projects normally mean signs that are to remain in place for both daytime and nighttime usage to regulate, warn and guide traffic in advance of and within the limits of the project including the crossroad approaches. Signs erected on fixed supports should be at a minimum height of seven (7) feet.

SIGN SUPPORT WEIGHTS

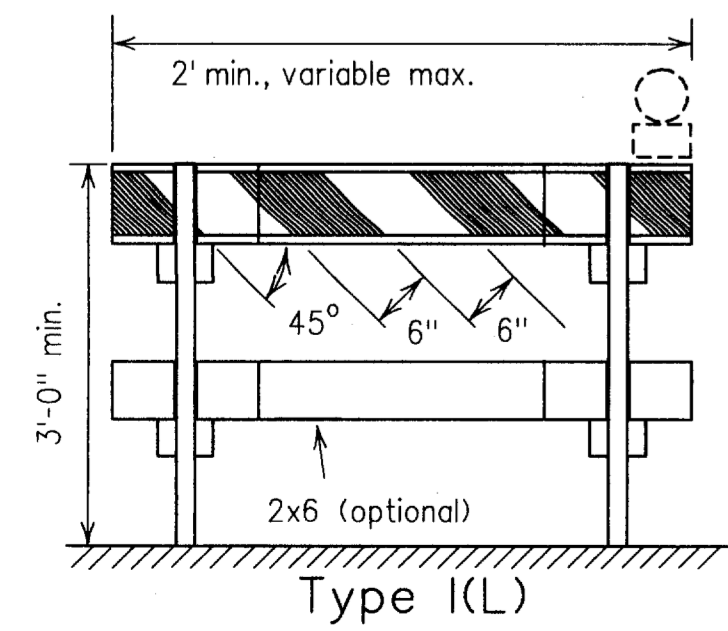
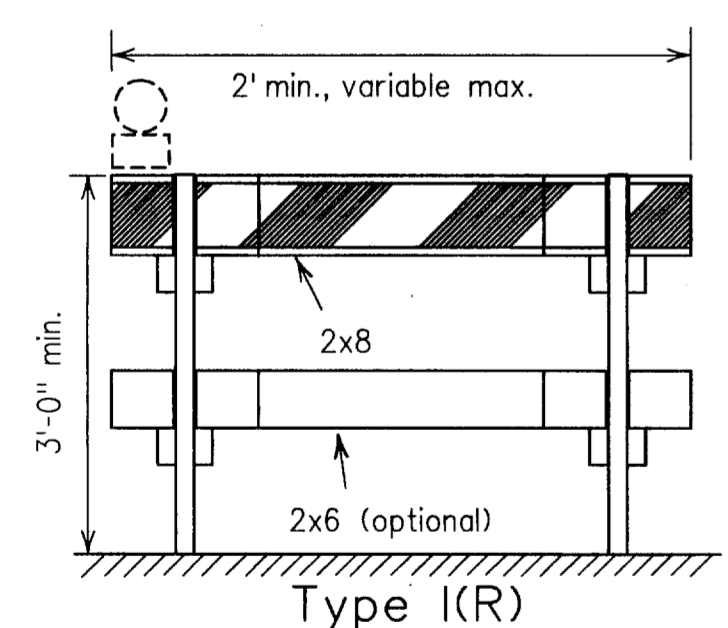
Where sign supports require the use of weights to keep from turning over, the use of some type of sandbag is recommended. The use of pieces of rock, concrete, iron, steel or other solid objects will not be permitted. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.

REMOVING OR COVERING

When sign messages may be confusing or no longer apply, the signs and supports shall be removed from roadway and shoulder, or the signs shall be completely covered. Turning signs from motorists view will not be allowed. When signs are covered the material used shall be opaque, such as heavy mil black plastic. Burlap shall not be used to cover signs. Signs shall be removed upon completion of the work. Duct tape or other adhesive material shall not be affixed to sign face.

TYPICAL SIGNS USED IN TRAFFIC SIGNAL CONSTRUCTION AREAS

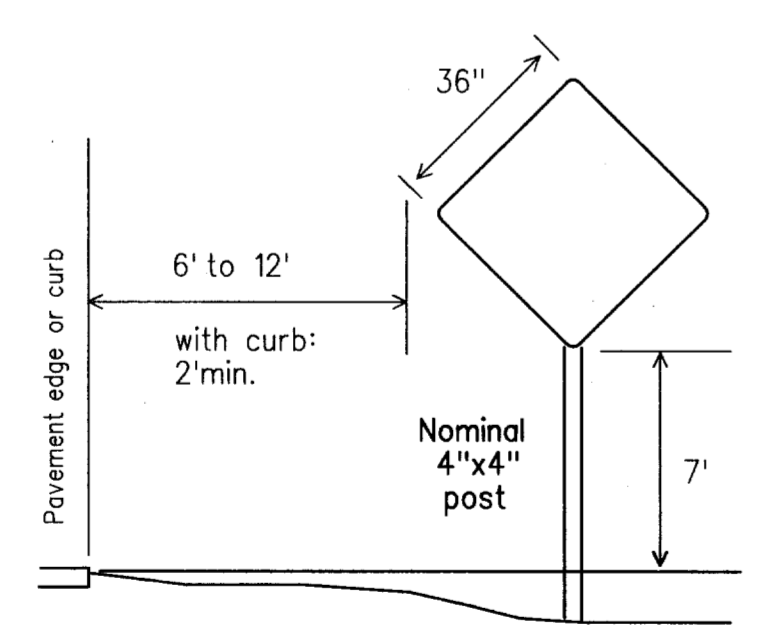
TYPE I BARRICADES



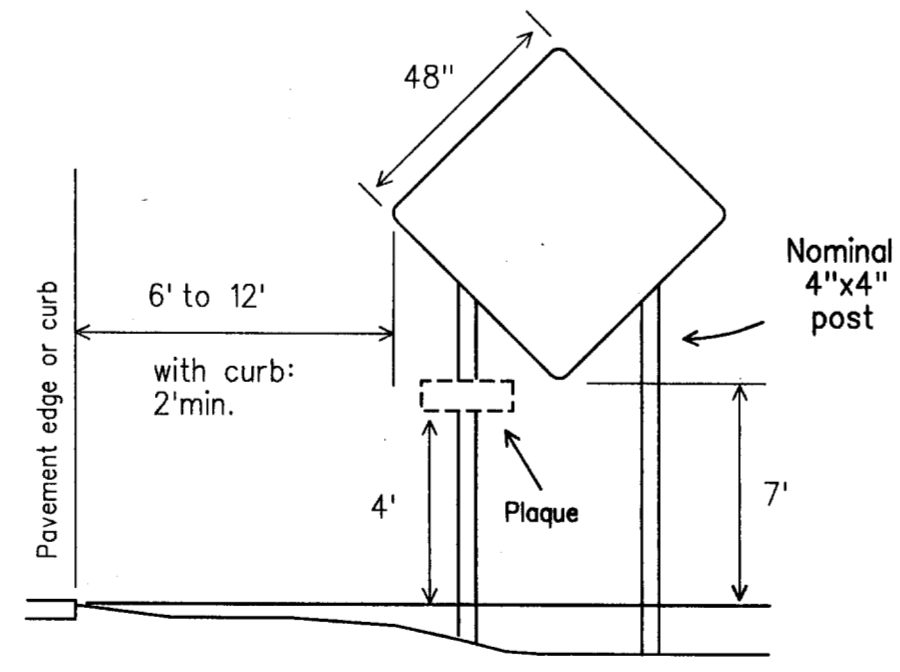
For Type I and II Barricades, both sides of the rails shall have reflective orange and reflective white striping.

TYPICAL SIGN SUPPORTS

FIXED SUPPORTS



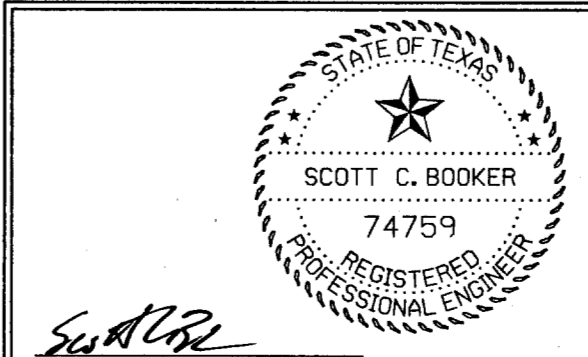
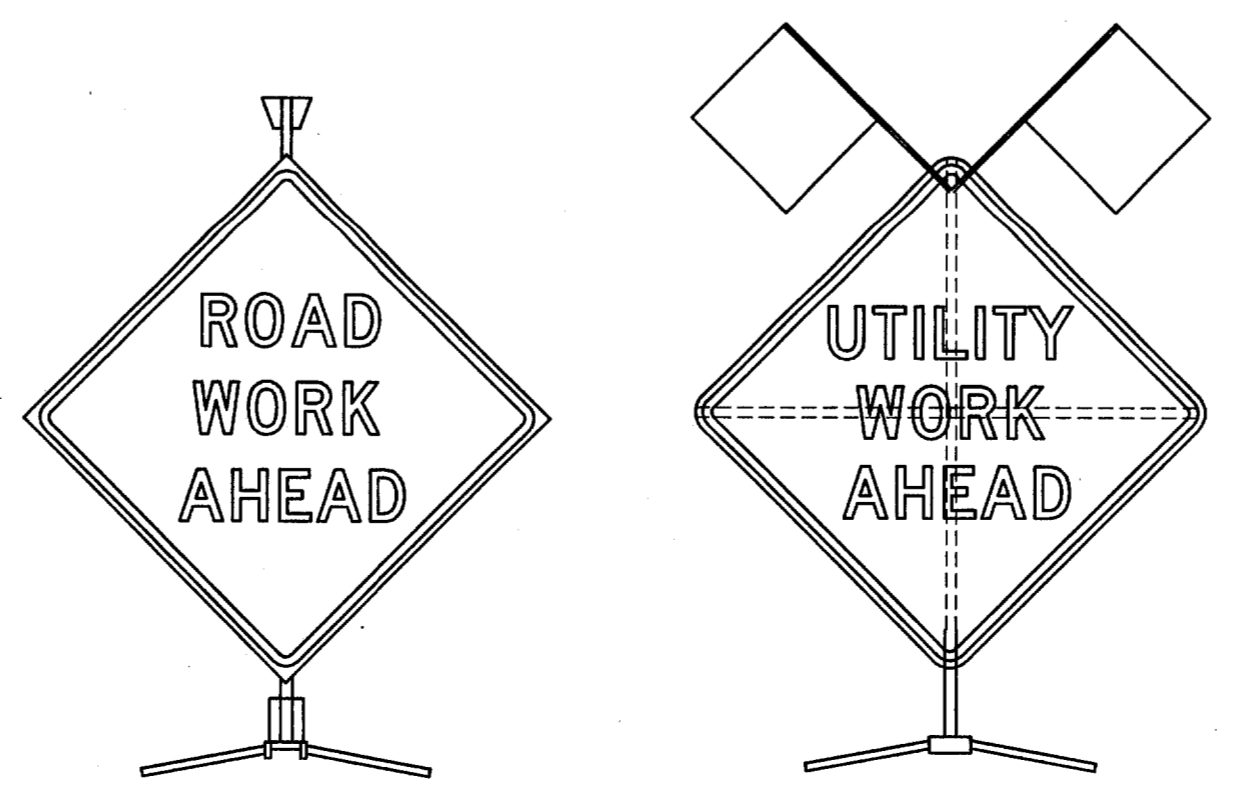
WOOD POST SIGN SUPPORT: for 36" x 36" and smaller warning signs, and other signs having an area not exceeding 10 sq.ft.



WOOD POST SIGN SUPPORT: for 48" x 48" warning sign.

Signs erected on fixed supports shall be at a minimum height of 7 feet. Embedment depth for wood sign supports and post type barricades should be 3 feet minimum, unless specified elsewhere in the plans. Driveable sign supports may be used and shall be installed in accordance with the manufacturers recommendations.

PORTABLE SUPPORTS



8-21-98

DATE	REVISION	BY
TOWN OF ADDISON DALLAS COUNTY, TEXAS		
DETAIL SHEET TRAFFIC CONTROL PLAN		
SHEET 2 OF 2 PROJECT No.		
 2630 W. FREEWAY #132 • FORT WORTH, TEXAS 76102 • (817) 877-5803		
DESIGNED :	S.C.B.	DRAWN : C.W.W.
APPROVED :	R.W.J.	CHECKED : A.M.
		FILE : WZ-2 SHEET 20 OF 20